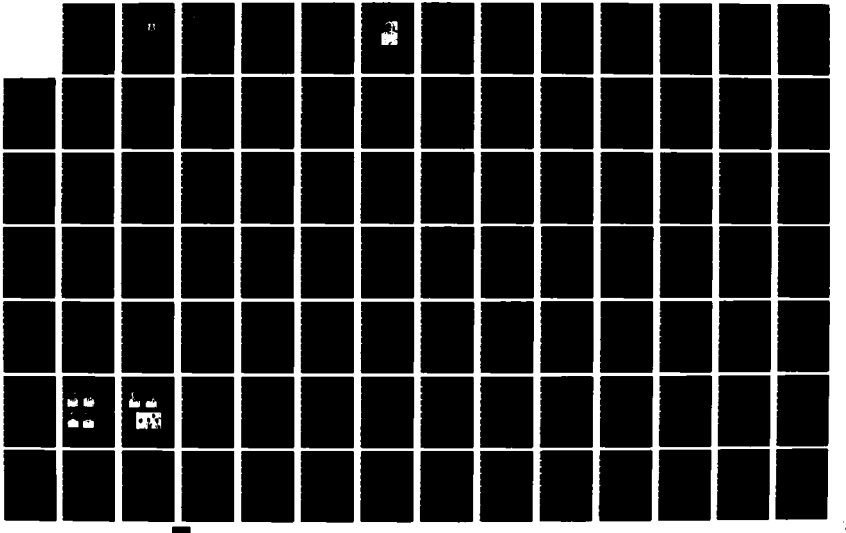
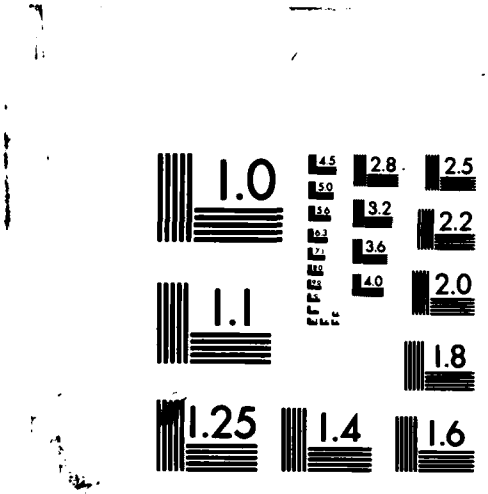
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FOREIGN TECHNOLOGY DIVISION

STEEL SPANS

by

P. A. Kabanov

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U. S. BOARD ON GEOGRAPHIC NAMES TRANSLITERATION SYSTEM

Block	Italic	Transliteration	Block	Italic	Transliteration
А а	*А а*	A, a	Р р	*Р р*	R, r
Б б	*Б б*	B, b	С с	*С с*	S, s
В в	*В в*	V, v	Т т	*Т т*	T, t
Г г	*Г г*	G, g	У у	*У у*	U, u
Д д	*Д д*	D, d	Ф ф	*Ф ф*	F, f
Е е	*Е е*	Ye, ye; E, e*	Х х	*Х х*	Kh, kh
Ж ж	*Ж ж*	Zh, zh	Ц ц	*Ц ц*	Ts, ts
З з	*З з*	Z, z	Ч ч	*Ч ч*	Ch, ch
И и	*И и*	I, i	Ш ш	*Ш ш*	Sh, sh
Й й	*Й й*	Y, y	Щ щ	*Щ щ*	Shch, shch
К к	*К к*	K, k	Ъ ъ	*Ъ ъ*	"
Л л	*Л л*	L, l	Ы ы	*Ы ы*	Y, y
М м	*М м*	M, m	Ь ь	*Ь ь*	'
Н н	*Н н*	N, n	Э э	*Э э*	E, e
О о	*О о*	O, o	Ю ю	*Ю ю*	Yu, yu
П п	*П п*	P, p	Я я	*Я я*	Ya, ya

*ye initially, after vowels, and after ъ, ь; e elsewhere.
When written as ё in Russian, transliterate as yё or ё.

RUSSIAN AND ENGLISH TRIGONOMETRIC FUNCTIONS

Russian	English	Russian	English	Russian	English
sin	sin	sh	sinh	arc sh	$\sinh^{-1}$
cos	cos	ch	cosh	arc ch	$\cosh^{-1}$
tg	tan	th	tanh	arc th	$\tanh^{-1}$
ctg	cot	cth	coth	arc cth	$\coth^{-1}$
sec	sec	sch	sech	arc sch	sech^{-1}
cosec	csc	csch	csch	arc csch	csch^{-1}

Russian	English
rot	curl
lg	log

GRAPHICS DISCLAIMER

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STEEL SPANS.



Hero of Socialist Labor Colonel General of technical forces.

Pavel Alekseyevich Kabanov.

Page 3.

REVOLUTIONARY ARMORED MOTORIZED DIVISION.

Autumnal Petersburg day. Cold dull Sun. Its light/world hardly breaks through into the quarters/premises of workshop through the frames blackened from fume and the dust . Air is heavy from the smoke of furnace and stink of soldering irons. Head turns. One feels sick. All bearings/angles, shelves, joiner's benches, are filled with finished bronze articles - candelabria, ink instruments and severe portly busts. From the unbearable heat and the closeness it is desirable to jump out to the street, to glance at the Sun, to take a sip of fresh air. But this it is not possible to do . At door itself - plywood desk of the master of workshop Dmitriy Petrovich Ivanov. From it he controls his workers. Each person in sight. As soon as someone has delayed or not done something right, master already unhappily/insufficiently will groan and will grumble:

- Remizov, again after hangover. Hammer in the hands shakes....

Only three years I went to the school.

When to me was fulfilled thirteen years, father said:

- Now it is possible for you, son, to become apprentice to artisan. You are old enough.

So I arrived in workshop of bronze articles of Ivanov. Nine people worked in it. I became the tenth.

Approached toward the end of 1912. Once in the morning our chaser Andrey Petrov entered into the workshop, he looked to the desk of master - it was empty ! He winked to us with his clever, cunning, eyes and took out from the side pocket of coat the newspaper "Pravda". Workers surrounded him and asked to read a little aloud.

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It is now difficult to recall the content of that read. But during that day I for the first time heard Vladimir Ilyich Lenin's name. Foremen spoke about him with bated breath as about the closest person in the world.

After finishing reading, Petrov said:

- It is the share of each worker to render to newspaper material

assistance !

Together with all I introduced my kopecks.

Andrey Petrov was the member of the party of Bolsheviks. From that day I tried not to miss not one conversation of Andrey with the workers.

Master guessed about the forbidden conversations of Andrey with the workers of workshop. But not only did he betray him, but even protected him from the eyes of police. Petrov and amateur to drink the old man Remizov were for him the most profitable skilled workers. It occurred, that the master suffered the explicit impudence of Petrov. I remember, entered for the finishing into workshop two busts: one - famous doctor-surgeon Nikolai Ivanovich Pirogov, other - tsar Aleksandr II. Master ordered processing of tsar go to Petrov, and of Pirogov to Remizov.

Andrey did look to the tsar and, after giving impression, that he does not recognize him, he did ask the master:

- whom is this you, Dmitriy Petrovich, to me did palm off? Sergeant-major whiskers, pumpkin head and face foolish, brutal.

- do not blaspheme. You see, its emperor majesty, our murdered tsar Aleksandr II.

Petrov in feigned fright recoiled from the bust.

- I cannot touch the priestly individual. Think, how I, unworthy slave, I will process th tsar himself, reresentative of God on the earth/ground. No, no, free from the sin ! Give real, decent person to me.

He passed to Pirogov's bust, and to Remizov he gave bust of tsar. The stupefied master began to cross himself, shaking his goat beard, he began to mince to the desk, repeating:

- Lord help us !

To evening itself, joyfully smirking, we listened to grumbling of master:

- How low people have fallen ! They censure tsar himself and they fear nothing ! In the jail it is necessary for all, into the jail, but not that again the revolution will occur....

In the summer of 1913 master died. The laws/rights of heir his son entered. Young master boozed. Workshop began to grow sickly, orders did not come. Wage was not obtained byworkers.

Andrey Petrov left from the workshop and got a job at the haberdashery factory of Bekhle, which was located on the Bolotnoy street. Gradually almost all workers of workshop proved to be in the lathe shop of this factory. Petrov dragged over after himself also me.

Here I already became the real, qualified working-turner. I earned not 40 kopecks during the day, and from 25 to 40 rubles in month. Work pleased me. Lathes were not foot as in workshop Ivanov, but motor.

In one of warm Saturday June evenings 1914 we went out with Andrey from the gate of factory. Andrey interrogative did look to me:

- You do want to go with me?

- Where?

- To the house of the culture of enlightened society !

I agreed, and we began to walk to Ligovka.

- Thus the club ! - stopped Andrey before the high house.

Ascending the steep/abrupt stone staircase, I heard sounds of unknown to me song. Chorus sang.

- "Varshavyanka", said Andrey, opening/disclosing the heavy door, which leads into the hall.

In the hall it was full of people. I looked around. Around also as Andrey and I, workers. After the "Varshavyanka" to the accompaniment of piano, they sang "Exhausted by heavy bondage". This song I also heard for the first time. Then to the presidential table moved out elderly, intelligent looking man in glasses. He deployed the newspaper "Pravda" and began to read aloud about our working needs, thoughts and expectations.

Young beautiful girl replaced man in the glasses. She did place by herself the book and did say:

- Let us continue reading Chernishevsky's novel "What to do"?

....

I left with Andrey the house of the culture of enlightened society by twilight night. Head my was broken from entire that seen and heard.

Page 6.

At the meetings of society for me were possible to be two additional or three times. During August 1914 the war was begun, whereas and gendarmes immediately forbade its activity.

With Andrey Petrov I said goodby, when him they already called into the army, at the station before shipment to the front. So he remained in my memory young, provocatively smiling, with the hand raised in the salutory address.

In the third year of war it was my turn. To tsarist government clearly was not sufficient cannon fodder, they thus and drafted green youths before the appointed time. Me, turner, they included as Private in the the spare armored motorized battalion. Several months I trained in the group of young ones. My youth thus ended.

From the group young soldiers were transferred into the repair

shops of battalion, into the building of the Mikhajlovsk manege (now in it is located winter urban sport hall).

The composition of battalion is mixed. There were here workers, peasants and children of clerks, merchants, small manufacturers rescued from the front, whom we named Papen'kin sons. During the distribution they were headed mainly for the staff/headquarters of battalion, the motorcycle and noncombatent groups. Was distinguished contingent, also, by the age. Together with the young ones served sufficiently elderly soldiers.

Mixed lot caused mutual hostility and enmity. Papen'ken sons looked on us, workers, condescendingly as commoners. We paid back to them with the same contempt.

February of 1917 advanced. Under the strikes/shocks of the risen workers and soldiers, inspired by Bolsheviks, the autocracy collapsed. In the days of February bourgeois democratic revolution the armoured cars of our battalion protected on the streets of Petersburg the risen workers from the gendarmes and faithful to the tsar military units. At that time the armored cars were terrible force.

After the victory of February revolution with the aid of the

Mensheviks and socialist revolutionaries the capitalists and landowners took authority in the country. The created by them temporary/time government fought for the continuation of war by Germany to the victorious end. Mensheviks, socialist revolutionaries supported it.

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Bolsheviks spoke against minister-capitalists and their policy of war. After the Bolsheviks the majority of working people went. Daily to us into the Mikhajlovsk manege agitators from the different parties came. To speak they knew how smoothly and at first glance convincingly. They all campaigned everything for the freedom. But for what and whose freedom, we did not always clearly understand. Stirrer-Bolsheviks taught us to examine events. The chauffeur of our battalion Georgiy Vasilyevich Yelin was one of such stirrers. He almost daily was in our workshop and for a long time he conversed with soldiers. Yelin possessed sharp/acute mind, deep knowledge and he well examined complicated situation. His conversations produced large impression on us. On one of the conversations I was introduced to him.

Everything pleased me in Georgiy Vasilyevich: and the black dense with the greyish hair hair above the steep/abrupt forehead, and

pleasant features of face. Later I learned, that Yelin took active part in the revolution of 1905, and in 1908 entered the social-democratic party of Bolsheviks. Georgiy Vasilyevich was the soul of soldier, our leader.

Each armoured car then had its name. It was written by large/coarse letters on the boards. Georgiy Vasilyevich's armored vehicle was named "Ryurik". In the manege "Ryurik" stood next to the "Knight", driver of whom was Miron Ogon'yan.

In the morning on 3 April, 1917, I arrived with the comrades at Yelin to the next conversation. We look, near "Ryurik" and "Knight" bustles about the whole brigade of drivers. They inspect vehicles, they service them with gasoline. Georgiy Vasilyevich lies/rests under the armoured car and something inspects. We stand, we guess about the reason for this attention to these two vehicles. Some indicate that them are prepared for the parade, others - to the inspection/review, the third - to the inspection inspection/check. But if this is so, then why they do prepare only two armoured cars, and not all?

Soiled by petroleum residue, crawled out from under the vehicle Georgiy Vasilyevich. After throwing open-end wrench into the locker with the instrument, he mysterious looked on us:

Today, friends conversation does not take place. There is no time !

But we did not depart and with the perplexity looked at the fuss near "Ryurik" and "Knight".

Go home, repeated to us Yelin, in the evening everything you learn.

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At 8 o'clock in evening, when all officers went home from manege somewhere moved out "Ryurik" with "Knight" and passenger motor vehicle.

We, puzzled, looked by after them. Someone said:

- If Yelin with Ogon'yan took away their vehicles unauthorized, then they will fall under the field court-marshal.

Soldier-driver Nikolai Kuznetsov, slyly after winking to us, answered:

- And I heard, Yelin said to guard commander that on the order

of the chairman of soldier committee the armoured cars are directed to testing....

At this time in entry gate the large group of soldier with Red Flag began to gather.

- We go Lenin to meet ! - shouted to me familiar driver.

I was about to rush after him, but me did grip by the sleeve person on duty on the workshop:

- where, Kabanov? Urgent mission, go to the machine tool !

At dawn into the quarters/premises of workshop joyous, excited Nikolai Kuznepov ran into:

- Children, I met Vladimir Ilyich Lenin ! We to him:

- Describe !

- We arrived to the square at the Finnish station, he began. - People countless thousands. Red flags, band, torches ! From all sides revolutionary songs sound. I look, our armoured cars with the red flags on the turrets went from the square to the station. They were

deployed in the pavilion and arose on the guard. Band began to play "Marseillaise", and then burst out "International". All yelled "hurray" !. I squeezed past to the armoured cars. I ask, where is Lenin. "Next to the woman, with his wife, with NodezhdaKonstantinovna Krupskaya".

Lenin smiled, arose to the hood of car and wanted to speak. But it is slippery, it is inconvenient. Then Podvoyskiy, Yelin and still several men helped him to get on the armoured car of Ogon'yan. Lenin pronounced speech. You know, with what words he did finish it? "Long live the Socialist Revolution" ! All again yelled "hurray" !.

After meeting armoured car with Lenin moved to the palace of Kshesinskiy.

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We with the torches, the banners and the band went after him. In the building of CC of the party we raised Vladimir Ilyich to the hands and carried him into the house. Only after this they began to disperse. This is how people met its leader !

I began to worry about Georgiy Vasilyevich's fate. For the unauthorized taking out from the manege of armoured car actually/really he could

severely be punished. I ask Kuznetsov, where is Yelin.

- Don't worry about him. He is now the commandant of the palace of Kshesinskiy. In the palace the heads of the party of Bolsheviks are located. They Yelin and Ogon'yan will not hurt !

Later I learned, that from our manege left not two, but three armoured cars. The third was directed almost following first two. Together with the third armoured car even more cargo and passenger vehicles moved out. From these vehicles mobile armored car detachment was created.

With Vladimir Ilyich's arrival all parties activated/promoted their activity. To us into the battalion quickened agitators from the socialist revolutionaries and the Mensheviks. They spread vile hearing/rumors about Lenin and Bolsheviks. Such "stirrers" our group of workshops placed outside the door. However, not all soldiers of battalion shared the views of Bolsheviks. The sons of the rich supported counterrevolutionaries. The internal situation in the battalion was heated.

And then soldier committee decided to call the general/common/total meeting of all subunits of battalion. This initiative supported the supporters of temporary/time government.

They wanted to give open combat to us. They developed the tactics of conduct, prepared their project of resolution.

Were prepared for the meeting and Bolsheviks. In the battalion Yelin arrived, who guessed the insidious tactics of our enemies and described about it to soldiers. Bolsheviks developed the plan of conduct at the meeting and prepared their project of resolution. Not long before the meeting newspapers reported that at it Vladimir Ilyich Lenin will come forward.

This was the first after February revolution *general/common/total* meeting of battalion. From the morning of 15 April (old style) the manege buzzed with hundreds of voices. Instead of the platform they drove on cargo motor vehicle. The chairman officer called all to the silence by the ringing of bell. And thus to the truck flew up the socialist revolutionary Avksent'yev in the hat, the coat, with the cane in the hands. Arms akimbo, after taking artistic pose, he knocked with cane and began his speech nearly thus:

- I am revolutionary not year and not two. I am the revolutionary of twenty years.

With all my authority I call on you to support temporary/time government alnd its patriotic just cause: war to the victory over our enemy - Germany.

Hall got noisy, hooted, was given hiss. Each expressed his disagreement with the appeal of speaker, as he could. Confident artistic poseur nature of Avksent'yev disappeared instantly. Frightened, without waiting, until they drag him from the truck by the hems, the socialist revolutionary retreated.

Similarly we acted also with other hostile speakers. Day already approached evening, but to meeting, it seemed, it will not be end. But no one departed, all awaited Vladimir Ilyich. Suddenly through the ranks passed the whisper: "Lenin arrived, he will now speak...". I forced my way nearer to the truck and did not take eyes from the platform, trying not to miss the appearance of Vladimir Ilyich. And nevertheless I missed it.

Rear numbers first began applauding. I turned up, after thinking that Ilyich entered into the opposite gates of manege. When I again raised eyes on to tribune, Lenin already stood there. He removed/took cap from the head and he pronounced:

- how do you do, comrades !

As the response the storm of salutatory applause rose. For life the almost each word of Ilyich was memorized. At first he described, how with the group of his companions-in-arms he arrived to the native land from Switzerland through Germany. He explained, why precisely through Germany. This explanation was necessary to scatter the provocative hearing/rumors of counterrevolution, supposedly V. I. Lenin was bribed by Germans and betrayed Russia.

- Slander on us, Bolsheviks, the enemies of revolution, said Ilyich, in order to confuse of workers and soldiers and to bring them to the fratricidal war.

Then Lenin explained reasons and essence of imperialist war, exposed its class character and in conclusion called not to give the temporary/time bourgeois government any support and with all measures to fortify the authority of the advice/councils of working, peasant and soldier deputies.

- advice/councils - this is sole and legal in our country government !

After the appearance of Ilyich no one decided to speak.

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To the voting two projects of resolution were introduced. One menshevik-socialist revolutionary, another - Bolsheviks. The overwhelming majority of soldier voted for the project of resolution of Bolsheviks. After voting all rushed after Ilyich. Crowd carried out me to the area, and here I proved to be next to Lenin. Trying to examine and to memorize each of his movements,, each line of face, I uninterruptedly looked at him. I do remember, when Ilyich did sit down himself into the vehicle, someone of the soldiers did ask Ilyich:

- And Milyukov it is possible to support?

Lenin answered:

- Milyukov the same capitalist, as all minister-capitalists of temporary/time government, and not less, than they, our enemy.

For the overwhelming majority of the soldiers of battalion Lenin's appearance finally and irrevocably determined relation to the Bolsheviks. We consciously and solidly rose to the defense of

advice/councils.

In the days of bloody July events the arrests of Bolsheviks were begun. Police arrested both Yelin and other active communists of battalion. The party organization of battalion was temporarily removed. Our vigilance weakened. Enemies used this. At night cossacks drove away several armored vehicles of menege and began to drive them through the streets of city.

On the happening misfortune I learned from my mother. During that day I was on duty at the workshop in the second shift/relief and it in the morning arrived home. Mother recently returned from the market and, piling on the table the purchased products, she shared the heard news.

- they say, that the drunk cossacks stole from your menege armoured cars. One fell down from Semyonovskiy bridge into Fontanka....

After gripping service cap, I broke into a run to the place of incident. On the bridge a huge crowd stood. In the cast iron rails gaped the hole. On the bottom of river the overturned division armoured car lay/rested. From the crowd the disturbed voices were given;

- Scoundrels, they became accustomed to supress people !...

- They themselves found grave...

I asked:.

At the people they did fire/shoot from the armoured car?

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- They did not dare, they frightened only !

After several days our special group raised armoured car. We repaired it and placed in the formation/order.

After this case soldier committee decided to take out armoured cars from the Mikhajlovsk manege and to drive them to the Petrograd side. Manege was located in the area, controlled/inspected by the troops/forces of temporary/time government. Petrograd side was monitored/controled by Bolsheviks. Even several days earlier to that place were transferred our repair shops. Near the building of workshops they placed under open sky the armored cars. From there

they on V. I. Lenin's order went to the assault of winter palace....

On 28 January, 1918, the chairman of the Council of Peoples' Commissars V. I. Lenin signed decree about the creation of the Workers' and Peasants' Red Army. The first Soviet regular military units were formed/activated from the volunteers. Without considering, I remained to serve in my spare armored motorized battalion. To volunteers for the service was assigned pay/finance allowance. I remember, to me as single Red Army man, they paid 125 rubles per month. Battalion mainly bore the protection of government installations and vital centers of city. The protection of the Smolnyy, where Vladimir Ilyich worked and lived was considered as the especially esteemed work. Now, when I see in the cinema or on the canvases of artists the armoured cars before the Smolnyy, heart is filled with pride. Indeed in these combat vehicles was invested my labor/work. I look on them, and in the memory the images of unbending Bolshevik Georgiy Vasilyevich Yelin and combat comrades from our battalion rise again.

It passed many years from that period, and in 1963 for me it was necessary to be in Ryazan. I discovered a local newspaper and read, that G. V. Yelin is the native of the village of a Zakharov-II Spassko-Vysel'skiy of village soviet of this region. But in three years more by the edict of the Presidium of the Supreme Soviet of the

RSFSR the village of a Zakharov-II Ryanzanskaya of province in the memory of its compatriot-revolutionary of Georgiy Vasilyevich Yeline was renamed the village Yelino.

Page 13.

In 1967 in the publishing house Moskovskiy Rabociy came out the book "Changed Kray". In this book there is the article about G. V. Yeline, which is named "armor commissar". From it I learned, that during the years of civil war G. V. Yelin headed the armor forces of our country. Then he was works manager, commercial representative of the Soviet Union in Germany, director of scientific research institute. At the end of the article I with melancholy read:.

"In the outskirts of village Yelino, beyond the pond, in the shadow of trees/wood, stretched old cemetery. Here always silence. Breeze only sometimes will run across, and rustle then trees/wood.... Obelisk... on the marble plate/slab terse inscription: "Yelin Georgiy Vasilyevich. 1888-1940. Member of CPSU since 1908".

But such people, as Yelin, do not die. Yelins do not depart from the life. They stood and they continue to stand always with their people at their battle post.

IN THE FIRST INDIVIDUAL RAILROAD COMPANY.

At the end of May of 1918 they disbanded our armored motorized division and they demobilized me from the ranks of the Red Army. Materiel of the battalion, its repair shops were sent into Lower Novgorod (now Gor'kiy).

After demobilization I rested not long. On the second or third day I arranged to work as metal turner at the electromechanical plant of Krundyshev. But I did not have time to get started, when they again called me in the ranks of the Red Army. Foreign intervention and civil war was begun. In the Red Army by that time there was almost half million volunteers, but this it was clearly not sufficient for the prolonged struggle with the external and internal enemies. The All-Russian central executive committee (VTsIK) [ВЦИК - All-russian Central Executive Committee (1917-1936)] on 29 May, 1918, accepted decree about the compulsory/necessary military obligation. The Red Army was built on the class basis. Was begun the draft/call-up of young workers and the working peasants, who were born in 1896 and 1897. Test mobilization in Moscow and Petrograd was

at first assigned.

Under the draft/call-up fell my year, but the alliance of metal-workers detailed me to the members of draft board, and I left for the district military commissariat, which was located at Fontanka, 90. When commission met, chairman described to us about the reasons for going over to the compulsory/necessary military obligation, recalled, that this is the first draft/call-up after the victory of the Soviet regime and that it is conducted after heavy imperialist war.

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He here distributed responsibilities between us and asked to fulfill them with all revolutionary responsibility.

During the first day commission did disturb one question: will arrive all draftees or they will not arrive? All arrived. No one avoided service in the Red Army. Of our gladness there were no boundaries to our joy.

On the third day I attained my draft/call-up. As authorized, doctors first me inspected. Then credentials commission accepted me. Chairman knew well my service record and, after thinking, he

proposed:

- Is created the first individual railroad company. With the technology you, Kabanov, are familiar. Shall we include you into this company?

- Sign me up !

I did not think then that with this simple word "sign up" I forever connect my life with the railroad troops/forces.

On the same day I left for the outskirts of the city, where in the building of the restaurant "Arkady" was formed/activated the first individual railroad company. At that time I still did not know that it was actually/really the first military railroad unit, created after the October Revolution. Following the first company the second company in Petrograd and the first Communist railroad battalion in Urals were formed.

In "Arkady" it was empty, uncomfortable. In the corners broken furniture was dragged in. All around - not soul. I climbed on the wide staircase to the second floor.

- thus the thirteenth - happiest ! - a man in the soldier

clothing/uniform expressed happiness at my showing up.

- say your surname, name, and your patronymic.

This was the company clerk Andrusov. After writing necessary data, he pointed with hand to the empty hall:

- You can remain here or leave home to tomorrow.

I preferred to pass the night at home.

In the morning of the following day the halls of the "Arkady" filled with draftees. After meeting Andrusov, I did inquire:

- How many have already collected?

- Six hundred fifteen. They manned completely !

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For this company modest quarters/premises of out-of-town restaurant proved to be tight. Soon they gave to us the part of the barracks of the former chasseurs regiment. But also here the same closeness. We slept side by side on the bunks. Bed linen was out of

the question. To the bunks they spread straw, they were covered with overcoats. Ration our consisted of caspian roach and lentils. As a joke we called caspian roach hydro-pork. But this is what is remarkable: not once from anybody I heard complaint of the everyday inconveniences and the scanty food. In the barracks merry combat mood reigned.

They formed us up on the parade ground. To company were presented its commander I. I. Starkov and commissar V. I. Razborshchikov. They broke company into the platoons, which, as in the field of transportation, they called services. I fell into the services of movement. I do remember, on one of the first exercises in the railroad affair platoon commander V. S. Ivanov, the former officer of old army, did ask me:

- What are responsibilities of the conductor of passenger train?

- To inspect/check tickets.

- What else?

I did not know other responsibilities of conductor. Refrained for some reason from the explanation about them also V. S. Ivanov. After exercises I asked him to explain to me the responsibilities of

conductor. To my surprise, the platoon commander said directly and frankly:

- I myself do not know.

It turned out, Ivanov had no idea about the rail transport. Subsequently I learned, that almost half of soldiers and company commanders for the first time came into contact with the railroading.

My first teachers in the field of transportation became the soldiers of our company - experienced engine men communists Peter Safronov, Mikhail Vasil'yev and Nikolai Mishin. Until the draft/call-up in the Red Army they worked on the siding tracks of the Putilovskiy plant.

Before continuing narration about the affairs of our first individual railroad company, it is necessary to describe about the position/situation in the first months after the victory of Great October in the rail transport, which was mutilated in the course of world imperialist war and did not manage transportation. More than half of steam-locomotive and rolling stock malfunctioned.

There were the negligible fuel reserves. Vladimir Ilyich Lenin in the article the "threatening catastrophe and how to struggle with it" wrote: "to Russia threatens the unavoidable catastrophe. Rail transport is broke down incredibly and becomes disordered increasingly more. The delivery of raw materials and carbon/coal to the factories ceased. Ceased the delivery of grain" [1].

FOOTNOTE [1]. V. I. Lenin. Complete collections of works, Vol. 34, page 155. ENDFOOTNOTE.

Old tsarist army was decomposed. Together with it were demobilized railroad units. In connection with this during January 1918 the military railroad workers of old army gathered their All-Russian congress in Kiev.

At the congress was accepted the decision/solution - disband railroad military units. Actually, this decision/solution confirmed the already achieved fact. Military personnel with strength of approximately 130 thousand people together with entire equipment were converted/transferred at the disposal of the People's commissariat of lines of communication (NKPS [99sp4 - People's Commisariat of Railroads]).

On 27 January the resolution of the congress of military

railroad workers was affirmed by the decree of council of peoples commissars. But life required from the young republic the creation of its railroad troops/forces devoted to the soviet regime. On 29 June government proposed the NKPS to begin the formation of such troops/forces. However, to gather the former military railroad workers was complex. People's commissariat did not conduct the centralized accounting and therefore he did not know, where they are located. Yes even at the places the people by all measures were detained by administration. Each engineer and skilled worker at that time was worth his weight in gold. As a result of these and number of other reasons the NKPS could not form one military unit. The mission of government was not carried out. Foreign military intervention and civil war was begun. Situation required immediate participation in the military operations of the railroad troops/forces. Then on their initiative the commanders of fronts and armies began the creation of railroad subunits. Thus appeared to the light/world our first individual railroad company.

It was necessary to prepare cadres for the new formations. On 17 July national commissar of military and navel affairs ordered to organize in the city of Torzhok of Tver province (now Kalinin district) the first Soviet instructor military railroad courses for training of the red officers of the railroad troops/forces with the period of training 10 months.

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Why for these courses was chosen Torzhok? Yes because the basic military railroad motor pool there was located. For this motor pool was headed entire authorized railroad equipment of the old army: armament, spares, materials. On this base with the motor pool special repair shops and production of instrument and narrow-gauge inventory were created. Narrow gauge railroads during the years of imperialist war were the basic type of railroads in the front area. Then they were extensively used both by us in the period of struggle with the counterrevolution and by interventionists.

Thus, in Torzhok were necessary conditions for the practical and theoretical assimilation of railroad affair. This took into consideration the Revolutionary Military Council of republic.

Also, one could no longer accept the situation of discordance in the structure of the formed/activated railroad units. End to this organizational confusion placed the commander-in-chief of the armed forces of republic by order No 41 of 5 October, 1918. Individual company was established as the basic combat unit of the railroad troops/forces. In the same order discussion centered on the need for

forming 16 new companies. The railroad troops/forces from the subordination the NKPS were transmitted to the People's commissariat for military and naval affairs. The post of the commander/chief of the railroad troops/forces of republic was introduced. With it the staff/headquarters was created. The commander/chief of the railroad troops/forces was subordinated to the commander/chief for the central division of military communications/reports (TsUP VOSO [Military Communications Service]).

The first commander/chief of the railroad troops/forces of republic became important engineer-civil engineer, former General of old army, participant in the Russo-Japanese and imperialist wars I. I. Fedorov. Military commissar was designated A. T. Knyazev, and chief of staff - A. V. Iwaszkiewicz.

The date of the publication of order No 41 of 5 October, 1918, is considered the birthday of the railroad troops/forces and yearly it is ceremonially celebrated.

But let us return to the story about my service in the first individual railroad company. On 10 October, 1918, at the company party meeting they accepted me into the ranks of the great party of Bolsheviks.

Meeting took place in barracks. I was so excited, that when the chairman named/called my surname, then immediately I did not realize, who he was referring to. Kolya Mishin lightly pushed me:

- Arise, Pasha, or do you not hear? !

After meeting they moved out to the street. Friends strongly/firmly shook my hand, congratulated me with the large event in my life. Pete Safronov smiled.

You see, how everything is simple, and you got excited. Entire night indeed I did not sleep, tossed, sighed.

On 24 October to us in the company arrived the commander/chief of the railroad troops/forces of republic Ivan Ivanovich Fedorov. He attentively inspected barracks, he visited the kitchen, ~~it~~ he had a talk with the cooks, then he became acquainted with the organization of educational process. Gloomy, dissatisfied he walked. Training in railroad affair was reduced to tapping out of the signs of Morse code on the telegraph set. Even program of special preparation/training was absent. We had in the company experienced engineer-railroad worker Nikolai Arutyunovich Karachan. He developed this program, but

no one examined it nor affirmed it. It was badly/poorly also with the combat training. Drills, target practice with the side arms barely were conducted.

I did hear, how Fedorov did ask the company commander:

- Why you are not occupied with marching drill?

- Almost all soldiers are experienced, seasoned, served in the old army.

This is not explanation. Drills - combat readiness, posture, discipline. But discipline in the company leaves much to be desired ! Train people for me !

Company rapidly was formed on to parade ground before the barracks. As it is supposed to be, they counted off, evened up the ranks, they took the position "rest". In concert they greeted the commander/chief. They thought, everything goes well. And suddenly Fedorov noted in the middle of formation/order tobacco smoke. Entire impression about our marching drill was damaged. After listening to our scarce complaints, Fedorov did ask:

And do you know, for what purposes is formed your company?

Someone did acquaint you with the history of the railroad troops/forces?

To all these questions we in one voice answered:

- No !

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Then the commander/chief of the railroad troops/forces of republic ordered to company commander to gather all soldiers in the club. I remember, as Ivan Ivanovich approached the table and simply, intelligibly described to us about the events, connected with the appearance of the railroad troops/forces in Russia. We learned, that railroad troops/forces were created in 1851 after the completion of the construction of main line Moscow - Petersburg. In the same year for protection and maintenance of this railroad 14 individual military-workers, two conductor and one tele-graphic companies were formed/activated. From them was formed the "special road guard". Goals and problems of railroad military subunits were determined by special position/situation. The personnel procurement of companies was carried out by military department.

Railroad Moscow - Petersburg was built as the main line of

strategic value. About this the note, attached to the project testified, drawn up for the report to tsar. In the note it was indicated that the projected/designed road will allow in the case of the necessity during two and one-half days to move from Petersburg into Moscow up to 61200 infantrymen or 6840 cavalrymen with horses. For that time these were very daring calculations. There was nothing similar abroad.

In 1852 in Russia the design of single railroad net/system for the entire country was for the first time in the world developed. In the explanatory note to the project it was noted that the construction of single net/system will ensure the fast manning of army for a state of war, it will make possible to accelerate its transportation to the western boundary.

In 1859 on the construction of railroad Petersburg - Warsaw was formed construction railroad working brigade for the training of personnel of builders and restorers/reducers of railroads during the period of war.

But the construction of railroads in those years went very slow. The Crimean War found Russia technically backward, roadless. It was necessary to deliver all necessary to theater of military operations on horses and oxen along the dirt roads become not passable from the

rains. At the front were not sufficient drugs, ammunition, and products. The damage/defeat of tsarist Russia in the Crimean campaign made it necessary to reexamine a question about the construction of railroads. From the "shelved task" was taken out the project of the creation of the single railroad net/system of Russia.

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In those years not only universal acclaim of the economic and strategic value of railroads occurred, but also were developed the basic conditions, which provided their military use.

On the eve of the Russo-Turkish War tsarist government decided, instead of the temporary/time military railroad groups created in 1870, to form permanent units. On these units were assigned tasks of construction and restoring a number of the important strategic lines and control on the frontal roads of the movement of trains. During the Russo-Turkish War the construction of lines from Bender to Galatz was the salient feat of soldier-railroad workers. The main line with a length of 304 kilometers was laid in 100 days !

Life has shown that not one contemporary army can manage without the railroad troops/forces. If during the years of war with Turkey in the Russian army there were 3 battalions of the railroad

troops/forces, then in the Russo-Japanese war - 7 battalions, and in the beginning of world war already 29.

At conclusion of conversation Ivan Ivanovich said that also the young Red Army cannot manage without the railroad troops/forces. To us, to soldiers and for the officers of these troops/forces, is necessary enormous work on the restoration/reduction of the destroyed by imperialist war transport of the country.

I. I. Fedorov's conversation remained in the memory of many of us all our life and gave to us the first impulse to understanding of role and value of rail transport.

Soon after the visit of our unit I. I. Fedorov published the special order of commander/chief and commissar of the railroad troops/forces No 5 of 14 November, 1918.

From that time it passed more than half century, but also now, when I again re-read this document, in the memory he arises the alarming still formation, the severe faces of comrades, who listen to the order:

the general/common/total impression: from the side of command personnel there is a great tendency to create something organic

whole, but no success thus far has been achieved, yes even could not be. Since the state/staff of company is completely random and people, who were occupied with the formation of company, are also completely random, means/facilities for the company there are none, equipment also none is allocated ... ".

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Particular attention in the order was turned to strengthening of troop discipline: "to instill by the most serious manner, discipline, remembering that it forms guarantee and cornerstone of the education of military honor.

Railroad service creates the situation of a constant state of war, and therefore in the railroad units discipline must stand at the very first place. This fundamental rule is ordered/prescribed to all subordinate units and installations to discharge in a steady and precise manner ... ".

After the appearance of this order the command element and the personnel of company began to introduce order. Greater became organization, were conducted exercises on the combat and special training. Soon came in rifles, carbines, pistols of system "Mauser", and we moved out for the first time to the shooting-range. But when

they delivered/brought some railroad hand tool, engineer of company N. A. Karachan began tasks in the railroad affair. Company was supplemented by specialists. According to single standard timetable its structure was rebuilt.

In one of the November days they invited me to the conference of the party bureau of company cell. Together with me were called two more comrades: Vasiliy Paramon and Stephan Poznyak. Bureau proposed to us immediately to be directed to the command of the chairman of Petrograd commune for procuring the grain to the starving city. After the conference of bureau we three together went to the chairman of commune. It sent us to the purchase of grain into the Pskov province.

Entire winter we bought grain, moving from village to village on foot and on carts, in the daytime and at night, in ringing frost and in the snow blizzard. We returned in Pieter in spring, during March 1919, and immediately we went to our company. Friends-travellers joyfully met me. Pete Safronov did ask:

- Did you stock up with much grain?

- Ten cars!

- And thank you for that!

I visited the commissar Razborshchikov. He warmly greated me and said:

- We almost missed seeing each other. Company obtained the operations order to move to the front. Before the formation now will announce it Starkov.

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I was aroused, I asked Vasiliy Ivanovich, what about me, didn't I also want to go to the front?

- I can in no way aid. You with comrade-grain procurers are situated at the disposal of the chairman of Petrograd commune. If he detaches you back into the company, then, if you please, go with us !

No one of us three wanted to be away from his company. We went to the chairman of commune, we began to request him to let us go. Chairman did not agree, even he accused us of desertion from the grain front. We ~~showed that~~ insisted, should we want to fight at the present front, where they fire/shoot and kill. We argued for long, persistently. Finally, Vasiliy Paramon could not contain himself, jumped up, banged

fist against the table:

- If you do not let us go, we'll go ourselves !

After this the chairman gave in, signed document about the detachment.

We found company at the railway station in the heated shelters. We found the car of our platoon. Soon our echelon started out.

Vil'no station was the point/post of our designation/purpose. The staff/headquarters of company here was placed. Next day after arrival into Vil'no the commissar of Razborshchikov called me into his car.

- I charge to you, Kabanov, to head the party organization of the platoon of tracks and bridges. Commander is there experinced, engineer Nikolai Ivanovich Ivanov. He's a good man, devoted to revolution, but to him is necessary the aid of communists in the mobilization of people and in strengthening of discipline, said commissar.

During the same day main forces of company left to the sector Vil'no - Molodechno. There as far back as the imperialist war the

Germans left several narrow-gauge lines and different equipment. To company it was assigned demount these lines, pack equipment, and then stick entire equipment into the cars and send to the base in Torzhok.

The platoon of tracks and bridges obtained the problem of helping local railroad workers to restore/reduce bridge across the river Viliya in the sector Vil'no - Dvinsk. To the place of the work we arrived at night. The morning met us with cold rain. I, as party organizer, lived together with the command personnel of platoon in the passenger car.

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Recognizing his voice I hear engineer Dmitriy Ivanovich Zabolotskiy entered from the street and he reports to platoon commander:

- Soldiers do not desire to work in the rain. They lie/rest in the heated shelters.

Nikolai Ivanovich answers:

If we judge by our Pskov province, then such rains will persist, a week or two, not less, we will work in the rain !

They will not go !

I entered in the sleeping compartment of commander, did propose:

- Will you permit me to have a talk with the Red Army men?

Ivanov smiled:

- if you please, comrade Kabanov, be so good !

I decided that the sole method to raise people - to activate by the authority of the party. Word of our party - law for all !

I approach the nearest heated shelter - no sound, as if all died out. I knock - no response. Then I gripped spring plate under foot, hit it against the strut so that there are forces and shouted:

- In the name of revolution, in the name of our party I order you to move out to the work !

I listened, creaked the door of car, it opened slightly. Leaned out our company joker Tyrtychnyy. He cast a look at me with sleepy eyes, and yelled to entire car;

- This is what the party man orders you: arise ! Don't you realize, that you have not come here to eat dumplings at your mother-in-law's.

Car stirred, there was groaning and coughing. Tyrtychnyy yelled:

Move more lively ! Not that Kabanov will replace the iron piece for a rifle and will give to you heat into soft spot !

The doors also of other cars opened. Soon, clanking their shovels, soldiers moved out to the edge of roadbed, got into formation. I reported to the commander:

- Platoon is formed !

Zabolotskiy pensive looked to me and said:

- Yes, after the communists our soldiers will go into the fire/light and into the water.

This was the first mission, which we fulfilled, as soldier-railroad workers. In spite of cold rain, to our zeal there were no boundaries. D. I. Zabolotskiy measured the bridge and designed its elements. Bridge was small, single-span, with the riding

on top.

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Until now, I remember its overall sizes: the length of 60.7 meters and the height/altitude of 12 meters. With the retreat the White Poles exploded abutment and supporting panel of bridge. Span structure lay/rested on one end in the river.

Commanders consulted among themselves and decided: on the spot of the destroyed abutment to place ordinary support, and span structure to raise. But before chopping crib, it was necessary to create for it base, to clear obstruction. In the cleared place to lay crushed stone. Carpenters, who better than others knew their affair, with impatience they hurried "to make crib with their axes". Without waiting until the implantation of base, they went into the adjacent grove and began to cut down timber ecstatically to cut logs. In the long years of soldier service they missed badly the work, the shaving, the tarry odor of pine tree. A large part of his time spent on the bridge and in the forest Nikolai Ivanovich Ivanov. Together with the soldiers he was glad at each successful cut. Whoever had no idea about crib support, Nikolai Ivanovich explained to them:

- Crib - this ordinary, of small dimensions,framework, like

framework of rural cottage. Its angles are chopped into the "dovetail" and the "cup".

Span structure is raised with the aid of the jacks. As the raising took place they placed under the logs of the crib. Affair succeeded.

On the fifth day the mission was carried out. Looked company joker Tyrtychnyy to the finished bridge and uttered:

Eyes are scared, but hands chop away. What a bridge you have built, fine fellows !

We for long could not detach eye away from our first-born.

After restoring/reducing bridge, platoon was connected to the company, which dismantled narrow-gauge branches on sector Vil'no - Molodechno. Here we for the first time were introduced to all elements of tracks. Soldiers joked:

- Now we are the real railroad workers: we can distinguish tie from the rail.

- And do you confuse covering with the backing?

- Do not worry, we know even what guardrails are and stock rails !

In similar jokes the incipient interest in the railroad affair was felt. Not only Red Army men from the worker ranks, but also former country fellows tried to broaden their knowledge.

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Once the soldier of our platoon Fedor Krasil'nikov asked me, hardly hiding on his face an expression of superiority:

- let us suppose you are the machinist of steam locomotive. You conduct train, and on tracks burns bonfire. What do you have to do?

I did not know, how it is necessary in that case for machinist to act, and in order to hide this, I did give a counter-question:

And you do know what happens with those, who start bonfires on the tracks? ...to the wall they place you !

- but bonfire burns, with malicious smile answered Fedor, and

you must go. What will you do?

I kept silent. Krasil'nikov with pleasure explained:

- possibly, this is stop signal to your train, and not at all fire. In that case immediately give stop signal to brakemen. Stop train. Send fireman or their assistant to the fire/light to find out, what's up. If malicious design, extinguish bonfire and go further.

Into the conversation Tyrtychnyy entered. He turned to Fedor:

- Bonfire - trifle ! But you, as the mechanic of steam locomotive, what will you do, if on the rails sits frog?

- I will crush it !

- That isn't done: live creature !

But - how to act?

- It is necessary to stop train. To approach the creature and to ask it to clea. track.

We with Fedor began to laugh.

It was a warm, sunny July of 1919. Restoration works succeeded. And suddenly the order: to destroy basic railroad constructions, to retreat !

It was necessary to annihilate the bridge, which we recently constructed, steam-locomotive depot, water-supply point:. Immediately all this seemed to us ridiculous, somehow it was beyond comprehension. But war is war. Order must be fulfilled ! A special subunit of demolition men in the company by state/staff was not envisaged. There was a group of volunteer-demolition men, which engineer Leon Arutyunyants headed. Group placed explosive under the objectives, to be blown up,. Wooden bridges then decided to burn. They brought fuel to them.

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Last troop train thus left. Sector and station were deserted. Train with the personnel of our company stood behind the end switches. They awaited demolition men. Finally burst in the area of depot exploded, then lightning on the switch tracks and on main track flashed. Entrance to the station was closed. Demolition men ran up to the train, rapidly they got in the cars. Steam locomotive gave the

signal of departure. And just when train moved out beyond the exit semaphore, above our heads shell whistled. The armored train of White Poles that approached the exploded tracks sent its visiting card.

During July Polish army occupied Vil'no, Lida, Baranovichi. Our company during these days covered sector Molodechno - Polotsk. This meant: to contain line in complete proper working order and together with the civil/civilian railroad workers to direct the movement of trains. At the end of July Poles occupied Molodechno and they moved to the stage between the Paraf'yanov - Budslav stations. The staff/headquarters of company was relocated from Molodechno to Polotsk.

As is known, from second half of 1919 the interventionists and White Guards made main general headquarters at Denikina. To the troops/forces of Bourgeois-landlord Poland was assigned to divert as much as possible the forces of the Red Army from the southern Front. Our high command element adhered to in the established situation of the tactics of the containment of Polish army. Therefore in 1919 on the Western Front with the variable success local fighting occurred in essence along the railroads. For us was necessary first to destroy railroad sectors, then to restore them.

During August the company obtained the order: to carry out

technical reconnaissance of the bridge destroyed by Poles on the stage Paraf'yanov - Budslav.

When the commissar of the company Razborshchikov asked my opinion as party organizer, whom to send as commander of the group of technical reconnaissance, I named/called the surname of the graduate of the Torzhok courses of red commanders Dubov. During the month of service in our platoon he produced the impression of daring, energetic man , that knows his business. Vasiliy Ivanovich agreed:

- Let's test him in the affair. But in order to not obtain any unexpected contingencies, you will go together with him. Select three additional reliable Red Army men to go with Dubov.

In reconnaissance/intelligence we took Vasiliy Paramonova experienced on the grain storing, jovial merry fellow Nikita Tyrtychnyy and strong, large/coarse, as if hewed from oak, Andrey Belyayev.

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Krulevshizna we reached by train. There we transfered to mobile detachment steam locomotive with the car - and went toward the frontal station Paraf'yanov. Three kilometers from the station to the

command post of the commander/chief of combat sector we passed over to hand trolly. We found the mud hut of commander/chief cut into the mound. Young strict commander met us drily, attentively verified documents. When Dubov described about assigned to us mission, he turned to the Red Army man standing at the door:

- Mitroshin !

In two-three minutes into the mud hut entered elderly, rather fat commander and reported about the arrival.

- Mitroshin, turned to him the commander/chief of combat sector, cover with the fire of your platoon the technical reconnaissance of bridge in the no man's land. Questions? You can carry out order !

Day was hot. Beyond the shoulders of stage high grasses showed greened. All around silence. Mitroshin walked on the ties with his platoon in front of us. He himself rolled machine gun. At the edge of the woods platoon commander waved to us by hand and ran out down beyond the embankment. All followed commander. On the embankment went only Dubov with Tyrtychnyy. Mitroshin stopped and warned/prevented Dubov:

You will see Poles and they will fire ! Descend from the

embankment !

- To bullets we do not bow ! - Shouted to him as the response Dubov.

We did not pass even fifty meters, when machine-gun bullets opened up. It was as if Tyrtychnyy was blown away from the embankment by wind. Dubov went slowly, with ~~the~~ dignity, retaining on face absolute stability.

We approached the bridge. Poles were located from us to the right, along that side of embankment, beyond the wide cane swamp/marsh. They could not see us - we were covered by earthen roadbed. We ask Mitroshin, will reach us with their fire ~~light~~ the Poles under the bridge or not. Mitroshin answered, that they will reach.

- In their reeds are hidden machine guns ... - he said.

Dubov did not believe it:

- swamp/marsh will suck in man and machine gun. Let's go ! - He gave an order to us.

Mitroshin laid with his platoon behind the ballast prism. We had just approached the bridge and stretched out tape-measure in order to measure the farm/truss fallen into the river, when from the swamp/marsh the heavy mounted machine gun hit. Bullets clattered against the metallic farm/truss. After hiding behind the support, in a fit of temper yelled:

- They are riviting bridge, reptiles !

The platoon of Mitroshin opened return fire on the White Poles. Our group also took up rifles. Enemy increased fire.

Mitroshin ordered to us:

- Don't waste ammunition !

Timber cracked, it was enveloped by toxic powder smoke. A real fire fight was set in. Bullets whistled overhead. This was my baptism of fire. I did not test/experience fear, strained I looked intently at the bushes of opposite bank and, when on front sight the figure of White Pole appeared, carefully I aimed and smoothly discharged hammer.

Suddenly rails began slightly to tremble. Railroad workers in such cases speak: "rails sing". The singing of rails with each minute got louder. In the curve the appeared platforms, covered on the boards by bags with the sand. In the tail of platforms the steam locomotive smoked.

- Armored train ! - yelled soldiers.

- Commander/chief sent help ! - said Mitroshin.

Gun shot shook vicinity and was heard muffled rifle-machine-gun crackling. Shell fell on opposite shore of swamp/marsh, after throwing up the fountain of mud. Home-made armored train moved to us, continuously firing/shooting the gun and the machine guns. Enemy lurked. Armored train approached close to the destroyed bridge and stopped. From the last platform we heard the familiar voice of the commander/chief of combat sector.

- Inspect bridge, we will cover you !

I did not note, when was wounded Andrey Belyayev. Turning white, he lay on the grass. To measure bridge we went four together. Dubov

rapidly rose upward with Tyrtychnyy and measured the height/altitude of bridge, I with Paramonov - its length. Dubov sketched with pencil on the leaflet of paper the approximate diagram of destruction, wrote necessary data. Enemy kept silent. Not without reason opinion among the soldiers was this: that side wins, on whose side the armored train fights. We today beat White Poles.

end section.

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Commissar V. I. Razborshchikov and company commander N. I. Ivanov already knew about all our adventures. The commander of the platoon of movement reported to them from Krulevshchizna. Nikolai Ivanovich thanked us for the service, asked about Belyayev's health, in detail questioned about all decomposition of bridge.

In the evening commissar gathered to him in wagon the communists of company. When we arrived, Vasiliy Ivanovich was reading some book. Inviting us to sit down, he closed it. I read the cover: "V. Lenin. "What are the "friends of people" and how do they fight against the social democrats"? Leisurely stroking the book. Razborshchikov pensively asked:

- What would we do without Lenin? Have you about this question thought?

I answered for all:

- We never thought about it. Does a child think about his life

without the father or mother? He considers their presence natural. We - the children of revolution and do not conceive it without Lenin !

- Happy fellows we, that Vladimir Ilyich Lenin precisely in our era was born. Neither earlier nor later, but at the right time !

Always meager to the expression of its feelings, Vasiliy Ivanovich today suddenly began to be candid.

- The most difficult in the political affair, do you know what it is? - sighed Razborshchikov.

- Everything is difficult !

- Not entirely so. Most difficult to expose the lurking internal enemy. Recently I talked with experienced communist, railroad worker Aleksandr Ivanovich Voinov. He arrived to the front by assignment of Peoples Commissar lines of communication.

- Does that mean, important person? - asked Paramonov.

- Authoritative ! Thus we destroy before the enemy route depot, communications and we consider this correct. It proves to be, we deal with crime, we blow up the economy of national economy, do not retain

railroads for the peaceful purposes.

- Poles on the route in good repair will suffocate us with their armored trains, screamed out someone.

- You guessed. Thus precisely this passed for some specialists of people's commissariat. They attempted to forbid us to blow up structures during the retreat.

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And what pretext did they advance for this? To maintain railroads for the peaceful purposes. They required so that not one structure/installation would be destroyed without agreement and sanction of the People's commissariat ! If, for example, we during the retreat should destroy bridge, then we must request permission of people's commissariat and wait. Having only obtained to our demand can we blow it up.

- Nonsense ! - it escaped in me.

- Clear thinking ! Enemies wanted to contain the activities of the Red Army and to make it easier for enemy to advance into the depth of the country. ¶ But - how did all this end? - asked

Dubov.

- By the break-up of the enemies of revolution. They imposed on TsUP VOSO [Military Communications Service] in regard to this prolonged discussion. Into the discussion Vladimir Ilyich entered. He guessed the concealed/latent concept of enemies and exposed them ! Vladimir Ilyich proposed to the council of defense to develop the project of special regulations on the destruction of the railroads, left during the withdrawal to enemy, examined this project and signed it. Now into question of the organization of obstacles complete clarity is introduced.

Vasiliy Ivanovich took out from the table the regulations printed by typographical method and began to read, explaining to us each of its paragraphs. When he finished last page, he said:

- We will study regulations in each squad and platoon. I ask all communists to take active part in this affair.

Alarming 1919 approached toward the end. Rainy, gloomy autumn came. And in the soul one was sad. The Red Army with combat withdrew to the east. Our company under the nose of the advancing/attacking enemy exploded the bridge across the Western Dvina and we relocated into Vitebsk.

At this time the rearrangement of the railroad troops/forces took place. The experience of war showed the need for the creation of more powerful/thicker units than individual railroad company. For the tactical combat unit they accepted battalion. Battalions were united into the brigades. In each brigade had to be not less than two battalions. And our first individual company was converted into the first railroad battalion.

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As commander of battalion they assigned Nikolai Ivanovich Ivanov, and as commissar Vasiliy Ivanovich Razborshchikov.

In operational sense battalion was subordinated to the staff/headquarters of the army, in area of which it operated. In the staff/headquarters the commander/chief of military communications/reports (VOSO) was our direct commander/chief. The commanders of combat units were now obligated in the case of withdrawal/departure to in form the railroad battalions and gorems [1], which NKPS [People's Commisariat of Railroads] formed.

FOOTNOTE [1]. Gorems - Advance repair trains. ENDFOOTNOTE.

These detachments worked together with us. After obtaining this information, we managed to prepare tracks left to enemy for the destruction.

This entire reorganization on the basis of the order of the Revolutionary Military Council of republic No 1781 of 24 October, 1919 was carried out. The standard structure of battalion and its single manning schedule was established/installed by this order. Strength of battalion composed 852 people. Commander and commissar headed battalion. With them the staff/headquarters was created. Battalion was divided into the technical and equipment companies and the noncombatant group.

The maintenance company (strength 678 of men) was divided into three platoon-services: tracks, movement and locomotives.

The service of rails consisted of 194 people. It was divided/marked off into four groups: packing-repair, reconnaissance, bridge and demolition.

The service of movement encompassed 307 people. Here entered the specialists: traffic operators and telegraph operators.

Transport service counted according to the manning table 177 people. These were mainly the machinists of steam locomotives, their assistants and firemen.

The equipment company consisted of 77 people. Its main responsibility was to overhaul different tools and devices and also service depots/dumps with the division equipment. For repairing the equipment the company had small consisting of two-three cars, movable workshops with the necessary equipment and the small autonomous power station.

Thus, numerous was the platoon of movement. And this is not by chance. Based on its strength the length of the sector of maintenance/servicing was determined. Battalion in this composition was obligated to ensure the maintenance of constructions and the movement of trains in the sector, which encompasses not less than five stopping points/posts (transit exchange, three sidings and small railroad junction).



N. A. Prosvirov.



S. N. Belyayev.



M. A. Maximov.



N. G. Desyatkin.

Page 32b.



V. P. Yegorov.



F. N. Doronin.



G. V. Churinov, A. I. Lur'ye, V. I. Didenko (standing), V. A. Antipin.

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The minimum norm of the passage of trains on this route was determined as five pairs of trains in a 24 hour period.

This reorganization touched me. After short conversation the commissar of battalion V. I. Razborshchikov proposed to me to head the party group of the equipment company. Hardly I had time to familiarize myself at the new place, when the general/common/total meeting of battalion selected me as the chairman of controlling-economic advice/council, which at that time was invested with great confidence and rights. He was obligated to follow the entire economic life of battalion, to suppress different kind of violation and abuse. These new duties I fulfilled with the large effort. But also on this post for long to work it was not necessary. In one of the March days of 1920 it called me Razborshchikov and said:

- I congratulate you with the promotion, comrade Kabanov ! You are appointed as the assistant of commissar of forty third railroad battalion.

This battalion was located in Pskov area. I did not want very much to part from my friend-comrades. They all became close ones,

native. But soldier friendship is frequently short. It is similar to lightning - it will flare up and is broken. But this short flash/burst glows in the heart inextinguishable. Front friend, like blood brother, the most true and devoted.

On the second day after this conversation I already left from Vitebsk to the new duty station. In half a hundred kilometers from Pskov is the station Ostrov. The staff/headquarters of the 43rd battalion was also located there.Before the war the distance between the cities Vitebsk and Pskov could be covered in two days. During those days the road took me almost a week. Much time was lost with the transfers from train to train. In the broken down cars there is a stuffy heat, dirt, drafts. Windows are broken, doors broken in, small stoves heated red hot heat only those standing nearby. All around public is the most varied: speculators, carpetbaggers, thugs, homeless children.

At the station Ostrov I found the staff/headquarters of the 43rd battalion. I presented myself to my commander A. F. Belov and to commissar I. I. Mergelyu. I was introduced to my new responsibilities.

I was responsible for the political educational work, for the organization of training on the elimination of illiteracy, and for conducting of the reading aloud of newspapers. Experience and knowledge in me was little. Suddenly it was high time to get a move on. Scale of battalion ! Actually, this was my first step to the ascending the steep official staircase. I took examination on party maturity. But then I did not understand this, and to my nature of a simple working fellow, such as I remained also in the ranks of the Red Army, alien was the feeling of self-seeking and vanity. One thing that I understood: on my shoulders large responsibility, but literacy and view clearly are not sufficient. It was necessary to fulfill the assigned work and to learn. Yes, precisely, to learn to work as to communist. And I learned, by nights I read Marx, Engels, Lenin.

On 25 April, 1920, White Poles together with followers of Petlyura began offensive in the Ukraine. Armed by imperialists USA, England and France, and numerically outnumbering units of the Red Army, the Polish troops/forces on 6 May occupied Kiev.

The party organized the resistance to enemy. In order to distract the forces of White Poles from the Ukraine and to break up the attack prepared by them in Belorussia, the Red Army attacked enemy on the line of Berezina river. Toward the end of May the troops/forces of Western Front advanced 100-120 kilometers. Enemy

removed part of the forces from the Ukraine, pulled reserves and pushed aside our armies to the initial positions. All these events developed so rapidly, that for the railroad troops/forces barely it was necessary in them to participate.

During June the 43rd battalion from the station Ostrov moved to Pskov. There to Pskov at the end of the month the 16th battalion arrived. In connection with the fact that both battalions were only half manned by personnel and equipment, command element made a decision to form of them one complete 16th battalion. As commander they assigned communist, experienced railroad worker Leonid Vasilyevich Danilov, and me - as his assistant in the political unit. It was not easy for me in the new post. Leonid Vasilyevich was reticent man, barely he investigated questions of way of life and personal life of soldiers and commanders. Rarely he even received someone with regard to these questions. When I reproached him for this, he answered:

- We are intended to serve, do our work, but not to indulge in trifles.

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And to me came soldiers and commanders with all their pains and joys...

True, sometimes L. V. Danilov for a long time conversed with me. This occurred most frequently, when he learned any pleasant news. Thus, at the end of June Leonid Vasilyevich was called by the commander/chief of the military communications/reports of Western Front. Danilov in the elevated mood returned from him. He visited me into the car:

- Soon we will pass into the offensive. It is necessary to be prepared for the great restoration works. The White Poles have forty five railroad companies. Imagine how much they can destroy.

- It is interesting, Leonid Vasilyevich, and what forces have available the railroad troops/forces of our front?

- As far as to me it is known, there are thirteen battalions and eight gorems. This is about ten thousand people. It is clearly small !

- Yes !.

- Everything destroyed by enemy we must restore in the shortest time in order to ensure the delivery of everything necessary for the

advancing/attacking armies. Problem is very difficult. Even in the staff/headquarters of front they express doubt, that we will accomplish it with the available forces. Moreover, we almost do not have restoration materials.

On 4 July, 1920, was begun the second offensive of the troops/forces of Western Front. White Poles were continuously rolled back/ago. Our battalion obtained mission to restore and to alter tracks in the sector Volkovysk-Belostok. We left there immediately. White Poles in this area so rapidly retreated that they had time to destroy only large and average/mean bridges. But they destroyed the bridge across the Niemen at station Mosta. Therefore route/path from Lida to Volkovysk was closed. The restoration of bridge was time-consuming. In order not to interrupt/break the supply of the attacking troops/forces, our battalion began connecting up the torn line, laying of detours. Next to the destroyed railroad bridge stood complete automatic cart. With it we laid the narrow gauge, were equipped areas/sites for the transfer of cargoes.

After laying of detour the battalion helped gorem No 3 to alter the sector of route/path from the river Niemen to Volkovysk.

We worked day and night. In order not to lose time in the walking to the echelons, we slept there, where we worked, in bushes or in the forest, the summer was blessing, heat. Communists gave tone in the work. They were the soul of battalion. Tens of best Red Army men in these days handed in applications for entrance into the party.

Almost everything was done by hand. The blown up rails were replaced by felled timber. Attachments were repaired in movable workshops. State of ties in this sector was especially in neglected conditions. The majority of ties were rotted, cracked, skids in such ties keep poorly. It was necessary to install holes with wooden plugs and in them to drive in skids. In spite of all difficulties, in a 24 hour period we altered from West European to the Soviet track from 12 to 15 kilometers.

But also this sufficiently high rate/tempo did not satisfy command element. The attacking troops/forces advanced ahead of us to 150-160 kilometers. Communications were expanded. The delivery of rations and ammunition was destroyed. The command element of front imperatively required eliminating delay.

And we had just adjusted route/path from Volkovysk to Belostok, when came the order of brigadier general: to alter route/path in the sector from Malkin, with approximately is 80 kilometers from Warsaw,

to Ostrolenka. In this day division echelon arrived in Belostok. The cars of the staff/headquarters of our brigade here on the station tracks stood. I was immediately called to brigadier general I. I. Starkov - former commander of our first individual railroad company. Brigade commander ordered me to inspect railroad sector from Belostok to Brest and to report about its condition.

Before setting out ~~for the tracks~~ I visited the headquarters car to report to L. V. Danilov about the obtained mission. Here they refined how to find battalion after the execution of task. The extent of the sector between the stations of Malkin and Ostrolenka is 55 kilometers. Danilov judged as follows:

We will move from Malkin to Ostrolenka. Calculate the speed of our movement at fifteen kilometers in a 24 hour period. Thus search for us.

And thus four young soldiers from gorem rapidly chased "rocker" forward. I prepared to write/record all noted damages.

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But enemy, obviously, retreated with such haste, that simply he had time nothing to destroy. My Red Army men were cheered up and to the

cycle of movement of levers sang songs.

On the second day in the morning we arrived at Cheremkha station. Here we met the commanders of the 45th railroad battalion. They described to me that route/path to Brest is in complete proper working order.

After obtaining this information, I hurried back into Belostok. I reported to brigadier general about the results of reconnaissance/intelligence. I let go soldiers on the "rocker" in there gorem, and myself ~~was~~ went by train to Ostrolenka. Why there, but not to Malkin? Simple calculation. I was situated in reconnaissance/intelligence three days. Extent of the sector was 55 kilometers. Even with all possible complications in the work battalion must already complete gauging and any minute now arrive in Ostrolenka. Train to Ostrolenka arrived at night, but battalion did not appear on the tracks. To await its arrivals until morning - to lose expensive time. I decided to go on the tracks towards it. I be somewhere not far. On the station tracks I met railroad worker, asked:

- where are red military railroad workers?

He answered, that in the evening they were on the adjacent side

track, about ten kilometers from there.

Ten kilometers? Trifle, in an instant I will walk ! Moonlight silvered the rails. After the station the route/path went along the dark/nonluminous malodorous swamp/marsh. I passed/avoided it, from pale shade of grasses and bushes there came a warm pleasant dampness. I walked off ten kilometer columns. Sidetrack. After the input semaphore the ducts/contours of station buildings appeared. I hear calm masculine voices. I go to them. On the bench two railroad workers sit. One elderly, fat, moustached, other - average/mean years, thin. I ask:

- Have you seen the Red military railroad workers on the side track?

The moustached one answers:

- Pshe, gentleman comrade, yesterday they altered tracks route/path on our side track and they returned in the direction of Ostruv-Mazovetska city.

The thin one added:

- Side track on the order of gentleman commander/chief we

covered. From the direction of Ostruv red signals were placed. What to do further - there are no instructions.

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- To Ostruv-Mazovetska it is far from here? - I asked.

- It is city, said moustached one, to it ten kilometers .... It is dangerous, do not decide to go one ....

But what should I do?

- Go to the hay-loft to sleep ! - proposed moustached one.

To me nothing remained but to agree with his proposition. Railroad worker led me into the shed, located not far from the side track, filled with fragrant hay. After placing under the head Nagant revolver, I rapidly fell asleep. I rose, as soon as began to gleam dawn, and went into Ostruv-Mazovetska. On the main and single dusty square of this small town there are many people. I approached the fine looking Jew standing to the side.

- What happened?

- The Red Army departs from us. We are agitated. We do discuss, what should we do: to remain or to depart?

For days I ate almost nothing. Stomach let itself be known. I ask the stranger:

- Isn't there anything to eat around here?

- It is possible, why not? There are only products in my house. If you desire, let's go.

We crossed square and entered into the synagogue. It was full of people. Above the silent crowd high tenor rang. With my fellow traveler all politely bowed. Here I understood, with whom the fate brought together me. Rabbi opened side exit from the synagogue, turned into the corridor and went down steep/abrupt stone staircase into the semi-dark basement jammed with different domestic junk. After asking me to wait, he was hidden behind the door and soon appeared with the piece of sausage on the plate.

- How much do I owe you?¶. - Not much ....

And he named/called this exorbitant price, so that my eyes darkened. I did not have available such money.

- Cheaper it is possible?

- Since you are courteous person, I give it to you entirely for free, to the loss of me. Take, only for you !

After apologizing for unrest I moved out to the square. On it the supplies and hand carts with the domestic household goods already appeared. Some inhabitants began to depart. I should also as fast as possible return, but where? At this time me elderly person in the form of Polish railroad worker approached.

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It is obvious, my depressed face drew his attention.

- Comrade commander, can I help you?

- Say, where did you hereabout see Soviet military unit?

- Already yesterday in the evening all your troops/forces left from the city. Retreat from Warsaw occurs. Immediately depart hence ! White Poles soon will appear. See, how population agitates.

- It is possible to obtain from you for the road at least a small piece of bread?

- Come with me. This is on your way.

The small wooden house of railroad worker stood in the garden. On the terrace elderly woman affably met us. Turning to me, my new acquaintance said:

- Guest from the Soviet country, mistress. In a moment food on the table !

Through several minutes on the table appeared the plate with the appetizing soup, bread. I devour soup, thank. From the house to the terrace young shapely girl went out. She bowed low to me:

- I heard unknown voice. I do think, who is this that arrived?

She looked to me and sadly shook her head:

- You have, probably, at home wife, perhaps also children, and you are here. White Poles thus will attack and they will shoot you.

- I have a wife, we await child.

I thanked hosts for the bread and salt, went to the wicket. On the way the mistress thrusted to me under my arm weighty hunk of bread. From the terrace carried the melodious maidenly voice:

- Remember us !

I remember, until now, but I do not know even your names.

From Ostruv-Mazovetska it was necessary to reach Belostok. Trains were out of the question. 80 Kilometers I prepared to measure on foot. But I had luck. On the route/path the retreating convoy I overtook. With it on the second day I entered into the city, found battalion. Danilov reported to me that the brigadier general ordered to battalion to occupy for the maintenance/servicing the sector Loda-Mosty-Volkovysk.

And I had just fixed myself up, when into the car messenger entered and he transmitted command/instruction immediately to report to the brigade commander.

Having shaken hands, Starkov ordered:

- Go to the chief of staff of the defense of city. With his aid get in communication with the staff/headquarters of army and obtain the permission/resolution of commander to blow up the bridge across Narev river at station Lapa.

After taking with myself messenger Red Army man Peter Kuznetsov, I went into "Ritz's hotel". The staff/headquarters of the defense of Belostok there was placed.

Already in the corridor of the second floor of hotel we heard loud demanding voice. It broke through from the half-open door of the office of chief of staff. In the office several commanders and Red Army men were located. Elderly, chief of staff with officer posture sat at the table and scolded the Red Army Man standing before him at attention.

After seeing us, chief of staff interrupted the conversation:

- What is it you want?

I in several words described the essence of the matter. He called the commander of communications/connection and dictated to him the text of telegraph to message army commander. He indicated to me the sofa:

- Await, response may take a while - that's the situation !

I wait an hour, a second .... From the reports of messengers, the scraps of telephone conversations it is clear that the situation is critical. Enemy crowds our units, encircles city. Is it not late to already explode bridge? I ask chief of headquarters to ~~throw~~ put aside all affairs and to attain permission for the explosion. It is not possible to leave bridge to White Poles. He looked ~~to~~ at me through the glass of his glasses, pressed the knob/button of bell. Into the room entered already familiar to us commander-signalman. Chief of headquarters ordered:

- Immediately report to the staff/headquarters of army that we await already an hour for written permission to blow up Narev bridge. If we do not obtain it, bridge will remain intact for Poles. Warn them they will for this be responsible according to all laws of wartime !

In spite of so sharp a telegraph message, written

permission/resolution was entrusted to me only in the morning. After obtaining the long-awaited paper, we hurried to the station. No longer there was gorem train, it left. At the deserted station there stood only the two trains: our battalion and the control of brigade. I communicated the obtained written permission/resolution to the blow up of bridge to brigade commander, and the train of the control of brigade started out.

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A. V. Danilov irritatedly asked:

- Why so long?

- entire night did not give permission/resolution the army commander.

- Now his permission/resolution is only worthy as justificative document. Bridge exploded thirty fifth battalion.

And Danilov shouted to the main conductor:

- Give departure !

In the oppressive silence the whistle of main conductor unexpectedly loudly was given. With powerful/thick bass responded steam locomotive. Echelon clanked with buffers, the wheels knocked along the rails. I with Danilov according to established custom from both sides inspected the moving/driving train and, after being convinced of the complete order/formation, we sat on the bunks of heated car. It seemed now us threatened no danger. The armored train of White Poles will be detained by the destroyed bridge. The infantry of enemy yet did not enter the city. We quietly observed through the half-open door, as swam past the destroyed station structures, semaphore .... And suddenly train was stopped. At this time the machine gun from somewhere on top was shooting were heard rifle shots. We jumped out from the heated car. Machine gun was from the church, the rifles they fired/shot at the echelon from nearby houses and buildings. Our machine gun on the tender returned fire. Our men jumped from the cars, they lay along the mound, they opened return fire. Danilov ordered ~~to~~ me to explain the reason for train stop. Together with the commander of maintenance company I. U. Arkhipov we crawled over to other side of staff. Under the cover of cars we made our way to the steam locomotive. Machinist indicated the tracks blown up in front:

- Specially done, villains, in order to stop us and to shoot at us !

To the place of damage I sent reconnaissance. White Poles opened fire/light from the ambush on the scouts. With return fire we forced enemy to become silent, they went into the attack, White Poles did not maintain/withstand, they scattered. Fell silent machine gun on the church. The guarded silence again above the city was established/installed.

We rapidly corrected the damaged tracks. Train went further. We calculated our losses. There are ten people wounded, none killed, but I am sick at heart. Suffers Danilov, he does not find for himself a place:now he will begin to smoke and will here crumple home-made cigarette, then he will jump up and begin to walk through the car.

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We feel both, that we are guilty, that we committed error and we nearly paid for it with the life of our people. First spoke Danilov:

- We are Happy-go-lucky people with you, Pavel Alekseyevich. We knew that Belostok swarms with counterrevolutionaries, that the battalion retreats from the latter, remains one confidentially with the enemy. How is it we did not consider that the enemy would not

miss this favorable moment/factor for an attack on us?

Yes, we were obligated to establish/install observation of the exit switches from the station. But in haste we did not do this, thus and was spilled blood ....

But, as the saying goes, arrived misfortune, opening gates. Trouble awaited us also ahead. For the cover of the sector Volkovysk-Lida we previously sent there equipment company. Company commander M. N. Shmelev met us in Volkovyska. He reported about the position/situation in the sector and advised to place train in the siding near the Nieman bridge. It was necessary to explode this bridge if necessary. New temporary/time bridge was constructed on the detour main track. Adjoined to bridge had 20-thousandth gradient, on top of that a curve. To this mountain not one steam locomotive pulled a freight train of standard weight. Therefore to the tail of each train was placed the steam locomotive of series - pusher.

In Volkovyska area the units of the rear guard of the Red Army fought. They had to be supplied with everything necessary for combat. The movement of trains occurred quietly, quietly. And suddenly - the clank of buffers, crash/grating, crack ....

Before our eyes near the temporary/time bridge, from the high

mound, two platforms of the armored train named Third International fell. Armored train was going in the direction of Volkovyska to the White Poles. On its tail panted the "ovechka" [1].

FOOTNOTE [1]. "Ovechka" - the steam locomotive of series
ENDFOOTNOTE.

Precisely it knocked out the platforms. Armored train stopped dead. Arkhipov standing next to me, began to grit his teeth:

What have those stupid people done? !

Danilov, containing himself, explained:

- The leading steam locomotive during emergency braking did not give in time signal to "ovechka" about the cessation/discontinuation of pushing. Pusher went under the gradient, it pushed on the train, pressed it - two platforms flew out.

They immediately inspected the place of accident. To place armored platforms on the rails was impossible - there was no crane. Movement of trains cannot be held up.

"On the shoulders" of the retreating troops/forces hang White Poles. At any moment they can show up at the station. We decided next to main track to construct by bypass, to enlarge embankment for it, to partially lay sleeper cages, to strew them with earth/ground. To the place of accident the military commandant of station came running. His jaws shook from anger, but he contained himself, talking with the commander of armored train - a very strong sailor:

- Under the tribunal with you ! What did I tell you? Take escort, your engineer road profile does not know. But you: "we'll manage" ! I proposed to you to leave the material base of train at my station. But you again had your way: "we'll manage without your advice" ! You managed !

We worked entire night. In the morning detour was ready. Danilov approached the commander of the armored train:

- What shall we do? with the platforms?

He looked on him with the eyes, full of desperation, turned away, mumbled:

- Anything ! Only leave nothing to enemy !

Together with the group of armored train we removed/took from the platforms guns and all, that it was possible to remove/take. We loaded it in the armored train. The platforms lain/rested on the routes/paths were exploded.

Thus the last train with the Red Army men from the station left. We obtained written permission of the army commander to begin the organization of obstacle. First of all we exploded bridge. Unhappy structure/installation ! How often we destroyed it and they restored it ! And thus again its fate was to fall into the rapid water of the Niemen.

From Volkovysk and to Lida we destroyed all constructions, on which the movement of trains depended. We exploded so that upon the return it would be possible to rapidly restore them. In Lida the battalion obtained the order of brigade commander to occupy the sector of Polotsk-Drissa (now Verkhnedvinsk), to restore/reduce the damaged constructions and to fix the operation of line.

Almost year our battalion exploited this front sector with a length of approximately/exemplarily 80 kilometers. We worked together with the civil/civilian railroad workers. By the order of

Revolutionary Military Council all railroad workers of front zone declared themselves mobilized in the ranks of the Red Army. Therefore they were subordinated to our commander of battalion. On them the application of military regulations was extended, on the level with us they were supplied.

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During June 1921 the battalion obtained the order: to be relocated to the Murmansk railroad.

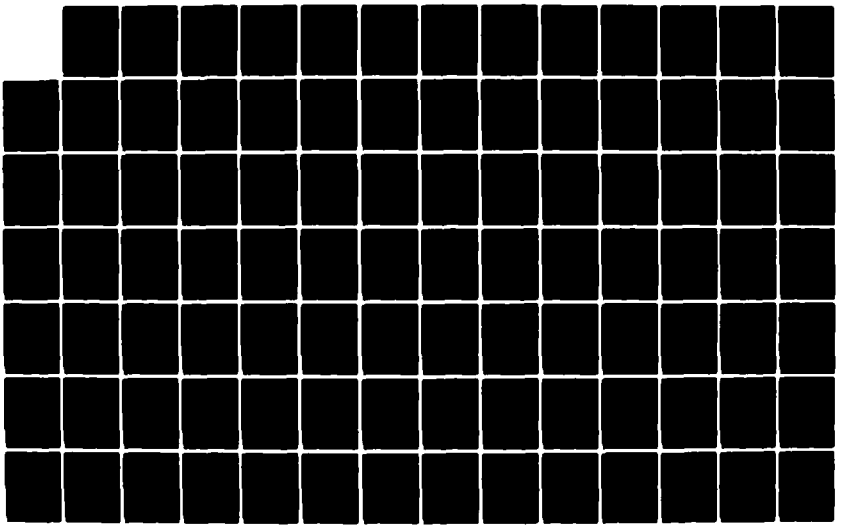
I said goodbye then with Belorussia and did not think that through many years will again have the occasion to return here in order to banish from its ground the Fascist monsters and to build new roads.

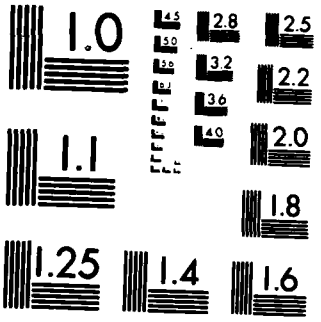
The north met us with boundless forests lakes and swamps/marshes, rare settlements ....

Murmansk railroad had high strategic value. On it the military cargoes, supplied by England and France through the nonfreezing Murmansk port were delivered. Road was constructed in a hurry by soldiers of old army and by prisoners driven into these forsaken places. Is possible to say, on their bones lay/rested now this small

AD-A138 472 STEEL SPANS(U) FOREIGN TECHNOLOGY DIV WRIGHT-PATTERSON AFB OH P A KABANOV 31 JAN 84 FTD-ID(RS)T-0527-83 2/8

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

creation.

In the distant time the detachments of the Red Army fought for it with the interventionists and the White Guard bandits. More than two years occurred combat. The Soviet troops/forces conquered.

Approximately in the month prior to our departure from Polotsk, on 5 May, 1921, the Revolutionary Military Council of republic published order No 981/171 about the reorganization of the railroad troops/forces. And as soon as we arrived in the Soroki (now Belomorsk), on the base of the 16th and 1st battalions was formed the 1st railroad regiment.

As Regimental commander was assigned experienced engineer-railroad worker P. P. Sizov. Regiment consisted of three battalions: operational, construction-restoration, bases and workshops. The strength of regiment for staff composed 1590 people. To it was attached for the maintenance/servicing sector with an extent of more than 500 kilometers from the station Bear Mountain to the station Polar Circle.

I was appointed as the commissar of the battalion of bases and workshops. With commander Pavel Naumovich Rakhmanov I quickly got along well, and we understood each other quickly.

In the fall of 1921 the reactionary circles of Finland again organized intervention in the territory of Soviet Karelia. The detachments of White Finns, relying on Karelian kulaks, cut Murmansk railroad in several places. In one of the cold November nights the regimental commander obtained the order of command element to urgently restore/reduce the wooden bridge burned by thugs across Onda river. On the alert the bridge company was raised, and after it to the place of restoring works departed entire battalion.

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To P. N. Rakhmanov regimental commander gave instruction to prepare for the bridge clips, dowels, bolts. Personnel of our battalion was directed to the cars of workshops. Smiths delivered forges. Hammers knocked, began to ring anvils. By morning was ready and sent to Onda the first batch forgings.

Within the record short period the regiment restored/reduced Onda bridge. After the rout of White Guard bandits by government was established chest metallic medal with the label: to the "honest soldier of Karelian Front". Medal decorated the breast of all soldiers and regimental commanders. This was my first

decoration/award.

In 1921 the Red Army routed the antonovshchina on the Tambov government and suppressed Kronstadt counterrevolutionary uprising. And thus during February 1922 in the Soroki unexpectedly arrived train with the replenishment for the regiment. Together with Rakhmanov arrived and I to the station to look at those who arrived. Everybody was there ! Tambovo peasants in handmade coats and in sheepskin coats, sailors in the short black peajackets and caps, some intellectuals in the glasses and coats and even the two shaggy priests. The considerable group of those newly arrived was directed to our battalion. Commander distributed people among the companies. Twelve sailors he transmitted to me and had subordinated to my workshops. I charged to my deputy A. V. Lavrentyev novices to guide to the sorting of the iron, fallen down near the cars. The commissar of regiment called me to him at this time regarding some affairs. Lavrentyev suddenly came running and he reports, that the "thugs" do not obey him, they sit and loaf. The commissar of regiment ~~me~~ tells me:

- Go, Kabanov, examine yourself, what's up, ~~and tell~~ and make them them work!

I come. Plodders sit in the calm beyond the car, they smoke low-grade tobacco. I gave an order:

- Arise ! - no attention, as if no one of them heard.

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For a second time I order:

- Arise ! - the result none.

Then I approached the most insolent looking and I order to him:

- arise ! - As the response he began to laugh and asked with the Odessa accent:

- To you, commissar, is it quite necessary that I would arise?

- Yes !

- Then know: I am fop, anarchist and no violence on my personality I suffer. Your order is violence. I cannot fulfill it.

What to do? To shout at them or to convince - is useless. It is necessary to search for other methods of effect. It is possible for the rejection of the work to decrease the ration or not to give it at all. It is possible to put him in the guardhouse. But are suitable

these measures in this situation?

I went into the car to the commander to describe about what was happening, to consult. And here to me arrived this thought: "they for sure have their leader. It is necessary designate him Chief". Pavel Naumovich agreed with me. To explain, who from them was leader was no particular problem. Tall sullen sailor drew attention. He looked on all sullenly, he spoke in interjections, friends implicitly fulfilled his wishes. I learned his surname. Petrov. They call him Afoney. Nickname - Shalyga. Everything as in real gang. I called in Petrov to my car for a conversation. To my surprise, he, after entering into the car, saluted, introduced himself. I seated him at the table. I gave to him to drink tea. We chatted. Petrov described to me that he was a participant in the Kronstadt uprising. Deceived him as many sailors, socialist revolutionaries, Mensheviks, anarchists. Now angry at all.

I feel, that he is great fumbler, but wants correctly to understand what is happening in the country. To many things I opened the eyes of Petrov. At the end of the conversation I proposed to him to become the chief of the company of workshops. Petrov thought and accepted my proposition.

Next day I declared to company, that Petrov was appointed as

chief. On my command he moved out forward, he took in his friends with promising view and gave an order:

- Right face - march !

All sharply turned, marchedinstep. Commander looked to me:

- Into the reliable hands you have placed them. It seems, experiment succeeded.

- Wait and see. This crew is capable of any tricks.

I in the evening gathered communists and activists of company. It asked them to aid in the fastest re-education of novices. Affairs went well, but defaulters nevertheless among them were found.

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Then I with the commander used a particular measure for education. We began to send those misbehaving as firemen to the steam locomotives to the company of locomotives. Experienced soldiers there served as engineers, you don't screw off there. Two weeks throws the fop firewood from the tender to furnace and he returns to the workshop quieter than the water, lower than grass. A lot of effort was

expended, but majority of these people became good Red Army men. We were satisfied also with my godchild Chief Afoney Petrov.

By autumn of 1922 on the Murmansk road the uninterrupted movement of trains was implemented. The control and maintenance/servicing took in their hands civil/civilian railroad workers. Main line did not require more the guardianship of military units. They transferred our 1st railroad regiment into old Peterhof. For lodging we got half-wrecked former cavalry barracks. We put them quickly into order, we did not have time completely to repair them, since frost hit. We had enough evil in that winter that even now I cannot recall it without trembling....

With our alarming military life on the wheels ended. For five years it became customary, common. We already broke the habitof the peaceful life. We entered into it as if into something unknown - with joy and the caution.

In the years of civil war the railroad troops/forces of the Red Army made a large contribution to the victory over the external and internal enemy. They restored 21 thousand kilometers of front roads, 3 thousand bridges, 212 water-supply points, repaired more than 9 thousand steam locomotives and 16.5 thousand cars. Is this much or little? Everything becomes known in the comparison. I will name/call

for this the general/common/total operational length of railroads at that time - 70.3 thousand kilometers. Consequently, we restored/reduced nearly a third of the entire net/system of the steel main lines of the country. But how often each kilometer we did restore, we did destroy and again restored? Who considered it at that time?

A low bow of the native land are worthy our comrades in work. A weighty share of labor/work we invested in the restoration/reduction of front roads also our comrades in arms - workers and engineers of bridge trains and gorems.

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They worked together with us, side by side, bringing into order the destroyed sectors of route/path, artificial structures/installations, stations and official-technical buildings. The detachments of special formations reinforced our troops/forces. In the middle of May of 1919 in the composition of the Red Army operated 25 gorems and were formed/activated 13.

For the services to the native land were rewarded with honorary revolutionary Red Flag of VTsIK [ВЦИК - All-russian Central Executive Committee (1917-1936)] five railroad battalions and Torzhok military

railroad school. On 31 January, 1921, the Revolutionary Military Council of republic published the special order No 258, in which it was said: "by the efforts/forces of the valiant Red Army the onslaught of the enemies of worker-peasant republic was repulsed, and the tormented country obtained the possibility to pass to the peaceful labor/work. Immense and crucial problems fell to the lot of railroad units. The victorious movement of the Red Army to a considerable degree was facilitated by the conscious and selfless activity railroad units in the restoration/reduction of the vital arteries of army in the field - railroads.

In the swamps/marshes of woodlands, in the sands of Turkestan, in the darkness of the polar night of Murmansk, on ice and in snow the railroad units, inspired by revolutionary clan, all forces devoted themselves to work, patiently and without any objection enduring all deprivations.

The Red Army will not forget the aid, shown/rendered it by the railroad troops/forces in its heavy struggle. From the person of the Red Army RVS of republic declares the commendation to soldier-railroad workers, to commanding officers and to the commissars of the railroad troops/forces of republic".

end section.

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WHEN DISASTER APPROACHED.

In the spring of 1936 I graduated from military transport academy, became the military building engineer of railroads and bridges.

The commander/chief of academy S. A. Pugachev read before the formation/order of graduates order, warmly congratulated them, and then declared:.

- The heads of the party and government invited us to the reception/method in the Kremlin.

To the Kremlin I was for the first time in my life. Indeed free access there then was closed. Were gathered "academicians" on the Kremlin square at the king of cannons. In the waiting of the approached comrades I mentally resurrected what we had experienced in the memory. I recalled the fiery years of civil war, live and dead comrades.

Flashed by in stages the recollections about the postwar years. All this time I much and persistently learned. Before getting into the academy, I sat at the educational tables of the advance courses of commanders and preparation/training in the institute.

Usually after the termination of the courses of students for the practice they directed them to the construction of new lines. Thus, during May 1925 I found myself on the construction of strategic main line of Orsha - Lepel'. Extent of the route 132 kilometers. All structures/installations, necessary for operating of line and life of railroad workers were raised. Periods given were hard. To the construction of this line almost all railroad troops/forces of the country were drawn.

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They assigned me as commander of the platoon of the 9th company of the 2nd combined regiment. Commanded regiment Aleksey Ivanovich Antonov, experienced railroad worker, always calm, reasonable. His authority in the regiment was very high. It occurred, will look Aleksey Ivanovich at the negligent one unhappily or with censure, he will say nothing, but the judged person through the ground from shame

is ready to fall.

And I once felt on myself this view of regimental commander. But this happened after the offense of a soldier of my platoon Ivan Semenov. During that day the Red Army men platoon transported the earth to the mound at bridge being built across Obolyanka river. They transported the earth on the narrow gauge railroad built into the quarry on the trolleys. Route/path lay/rested on the steep gradient. Trolleys we braked by hand, with the aid of the wooden levers. Some fast drivers descended in the trolleys under the gradient as from a mountain on the sleds, without braking. It occurred, such sleds flew from the rail of tracks together with the riders. We forbade such descents punished several fast drivers, but this did not have an effect at all ....

Ivan Semenov was carried down the mountain with the breeze. We shouted to the fast driver: "brake" ! As a response he laughed loud from the pleasure and waved his hands. But he suddenly remembered. Trolley developed high velocity. All died in the fear. Semenov pressed with his foot on the lever of trolley, attempting to reduce velocity, but it was already late, trolley derailed. Semenov head over heels rolled down from the mound and broke leg. This scene occurred within sight of regimental commander, who thus was watching us, so that no longer occurred "rolling down the hill" with the

weakened hand brakes.

We built the line Orsha - Lepel' actually by hand. Most important "assembly" was at that time wheelbarrow. A deficiency in the vehicles and mechanisms was compensated with enthusiasm. In all units was deployed socialist competition under the slogan "you give Lepel' by 6 October" !. the rates/tempos of laying tracks increased from 0.7-1.0 to 4.3 km in 24 hours. How much truly titanic labor/work invested soldier-railroad workers ! Alone the overall volume of earthwork was about 2 mln. cubic meters. But how many bridges were raised, pipes laid, ballast poured ! Road was constructed in one year. In Lepel' in solemn conditions situation on 7 November, 1925 was opened it. By the first train into Lepel' from Orsha arrived Mikhail Nikolayevich Tukhachevskiy commander of Western military district.

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This construction was excellent practice of capital construction for the young railroad troops/forces of the Red Army.

In the honor of the large labor victory of military railroad workers was affirmed the memorable badge "Orsha - Lepel'", with which they awarded all outstanding commanders, political workers, Red Army

men.

From Lepel' the regiments departed to their winter quarters. Our 2nd regiment returned to Leningrad into the barracks, which were located in Pod"ezoniy. They assigned me as company commander of workshops. In the company besides workshops there were depots/dumps of military-technological equipment.

For life this case was memorized. On one of the days I visited the depot/dump. Soldiers cleaned, they lubricated and placed in the covers geodetic instrument. To its storage and storage and upkeep we concerned ourselves especially attentively. Instruments are expensive, at that time are rare. Each instrument was taken care of as treasure. Periodically I inspected/checked the condition of each instrument. During that day I asked the tool maker Yefim Lazarev to obtain level from the regiment. Lazarev obtained it. Only he opened up cover and took out from it telescope, as behind the door command was given: "Quiet" ! Into the quarters/premises entered the assistant to the commander/chief for the central division of military communications/reports RKKA [PKKA - Workers' and Peasants' Red Army] L. I. Konovalov. After seeing in my hands level pipe/tube, he said:

- I love precision instruments. When I look on them, it seems to me that live human thought beats in the metal, the glass, in the

entire construction/design. Strange feeling! To the precision instruments I relate as to the living beings!

I answered, that also I greatly love precision instruments.

- Charming! But when one loves, what does one do? One cares, isn't that so?

And, indicating to me with finger the red spot in flange of telescope, he frowned:

- Allow me to doubt your love for the precision instruments. See, rust!

I saw this spot repeatedly and objected:

- Oxidization flew off. The level is old, worn, thus and came forward redness, copper indeed does not rust.

- Rust, the most real rust! - in spite of the truth persisted Konovalov. - You do not take care of state property !

As if they lashed me with lash on face. It is painful to hear this wrong reproach!

In the act of inspection check wrote Konovalov nothing bad, he did not note the alleged rust. But then my heart after this conversation remained "rusty spot". This is how deeply it is possible to wound man by injustice!

Military person, as a rule, for long is not retained at one place. I did not stay in Leningrad. In the spring of 1927 regiment was relocated to the Ukraine, where was deployed the construction of main line Chernigov - Ovruch. L. I. Konovalov led construction.

Extent of route - 180 kilometers. Area relief complicated, is cut by the Dnepr rivers and Pripet. Excavations, embankments, bridge crossings.One earth/ground it was necessary to overturn mountains. Again, as to the line Orsha - Lepel', command element assembled almost all railroad regiments.

The 2nd railroad regiment went to the head sector, which began from Desna in Chernigov. They declared the construction urgent. Socialist competition burnt. We worked without tiredness, with the joke, by song, with the flame! We "rolled up" route in one year 1927.

On this my career of builder temporarily was broken. They sent me to learn at the advance courses of command personnel at the school VOSO. After the termination of courses I returned to the regiment and was appointed as the commander/chief of regimental school. In the fall of 1930 I entered the preparatory department of the department of the military communications/reports of the Leningrad institute of the engineers of rail transport. In 1932 on the base of our department the military transport academy, student of which I became, was created in Moscow.

While I learned, my comrade-railroad workers constructed routes Chernigov - Novobelitskaya, Tula - Sukhinichi, Unecha - Vorozhba, Roslavl' - Osipovichi, Valuyki - Nesvetay. That's not counting all lines ! If they are extended into one thread, then it will be length of several thousand kilometers. From these recollections distracted me the voice of the classmate Mikhail Lyubavin:

- Do you know, where we go from here?

Someone of the children answered for me with solemn undertone:

- In Georgiyevskiy hall of large Kremlin palace!

As if we knew what is Georgiyevskiy hall!

Finally they conducted us through the territory of the Kremlin. Here is large Kremlin palace. We climb up on its wide marble steps/stages, covered with many-coloured carpet. We enter in Georgievskiy hall and stop charmed .... Playing with all colors of rainbow crystalline chandeliers, the milk-white marble walls - everything as in the fairy tale! Even after the repeated invitation to go and to be seated at the tables no one of us decided to take a step into this fairytale beautiful hall.

It goes without saying, one additional circumstance bound us. At the reception/method there will be I. V. Stalin. Therefore into the hall we entered everyone immediately, quietly, with bated breath.

Along the hall guest tables stood. In the beginning of hall the table for the government was covered. It stood across. I with Lyubavin found the indicated in the invitational ticket number of our table and we sat down.

All of us wanted to see Stalin as soon as possible, to see him not on the platform of mausoleum during the parade, but thus here so simply, in the ordinary situation.

Hall exploded with applause, all arose as on the command, there burst out "hurray"!. They applauded and shouted "hurray"! for a longtime, to fatigue. I. V. Stalin was far from us and all attempts to examine him as should be had no success. Stalin first ceased to applaud and, smiling, he raised hand.

Glasses began to ring. They pronounced the first toast for I. V. Stalin. Again applause, again cries "hurray"!.

At the scene played band, appeared the best artists of the country. I. V. Stalin congratulated us with the successful termination of training, he wished to us labor and combat successes.

We emerged from the Kremlin happy, excited. Before us was opened/disclosed wide life ....

By the order of the commander/chief of VOSO of the RKKA I was appointed as the assistant to the commander of the 3rd railroad regiment for technical section. Regiment was located not far from Gomel in Novobelitsa settlement.

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On an early May morning in pine forest, that rings with bird calls, I found the staff/headquarters of unit. Person on duty conducted me into the office of regimental commander. From behind the table broad-shouldered Colonel rose to meet me. After listening to my report, he strongly/firmly shook my hand.

- Kondratyev Zakhar Ivanovich!

About Zakhar Ivanovich Kondratyev I heard even in the academy. Experienced commander, engineer by education, a participant in the civil war.

Kondratyev introduced me to the key personnel of regiment. I was introduced to the commissar I. N. Katsnel'son, chief of staff N. V. Kuligin, commanders of battalions M. I. Al'fonsov, V. Ye. Matishev.

Zakhar Ivanovich described to me that command personnel of regiment has solid theoretical and practical preparation/training, excellently trains personnel. In the Belorussian military district for the duration of the number of years the regiment occupies the

first place on the combat, political and special training. For the successes achieved the regimental commander is rewarded with the Order of the Red Star.

Next day I was introduced to the disposition of regiment. It occupied the area covered with forests cut by ravines sufficiently large. Nearby flowed river Sozh. I very much liked the vast parade ground for drills and inspections/reviews, athletics ground, excellent shooting-range. Across the ravines the Red Army men learned to build a bridge. Ten-kilometer siding connected regiment with Novobelitsa station. Branch served not only as transport artery, but also as training range.

As deputy commander for technical affairs (Pompotekh) of regiment, I was responsible for proper working order of equipment, its correct use, maintenance/servicing, storage and repair, for its combat and mobilization readiness. Obligated was I to organize the technical training of personnel of regiment. It is necessary to say that the equipment was for those times first-class. The second five-year plan was completed, and Soviet plants already supplied to us highly productive excavators and pile drivers, scrapers, bulldozers, different manual electrical instrument. There were in the regiment also movable repair shops of the type NVR with their own small power station.

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On the third day after arrival in the territory of depots/dumps I met with Z. I. Kondratyev. Having greeted, he encircled by hand all around and exclaimed:

- Thus here is what we became rich with ! Now only manage to use our wits.

Was begun summer field practical training - construction of rail siding tracks to different military depots/dumps and bases. On these works the 1st battalion of V. Ye. Matishev and many companies from other subunits was wholly occupied. To find at this time in ~~its~~ his office the regimental commander was impossible. Continuously he traveled in his GAZ automobile through the construction objectives, scattered in the enormous territory of Belorussia. But as if much force and energy the construction of branches did not take, we had to solve a second crucial task - to conduct the retraining of the reservists of district. Therefore many commanders from the morning to the night were occupied with the soldiers of educational groups on the construction grounds, the shooting-range, in the athletics ground. Forest was filled with the sounds of spike hammers, pile

drivers, ratchet, with the bursts of tolite blasting cartridges. Red Army men chopped, cut, built, dismantled and again they built.

Particularly severe was the situation at this time with the equipment company, which was occupied with the repair of equipment and instrument. The majority of personnel of company provided the subunits, which work on the construction of lines. Objectives - ten. Here and there occurred breakdowns in the vehicles and mechanisms. The technology frequently malfunctioning from the excessively high loads and unskillful treatment Most of all breakages were in V. Ye. Matishev's battalion. Vasiliy Yefimovich frequently overestimated the possibilities of assemblies, that also led to the breakages.

The summer of 1936 was hot. From the heat there was no rescue even in the shadow of dense pine trees. In one of the July days I arrived at training area/site. Carpenters worked bareback. Bronze backs glistened from ~~the~~ perspiration. Junior commanders trained soldiers for cutting of cribs. Between the "bonfires" of logs stood in beauty the frameworks with the angles, made into the "cup" and the "foot". Here the group of soldiers assembled package for the span structures. To me, to engineer, it was not difficult to present entire further technology of the assembly of small wooden railroad bridge. After preparing all elements, carpenters will gather them.

After the bridge will be ready, thoroughly inspected by specialists it will obtain the appropriate evaluation, ~~it~~ they will order to dismantle it. Then this subunit it will here build a bridge of new construction/design and having again assemble it, then will dismantle it.

Some soldiers, especially older, that arrived to the semimonthly retraining, did not like this work. They turned to the commanders with the request to send them to build real bridges on the siding tracks. After admiring the work of carpenters, I became the involuntary witness of this scene. Something did not go well with experienced Red Army man Andrey Aronov. He insisted that his partner-novice would line under the frame crushed stone in the manner that civil engineers under the tie line it. Novice did not agree, he showed, that this base will not maintain/withstand train load, it will be pressed down and bridge will sit down.

- See, was excited novice, we made a frame ten centimeters shorter than it is necessary. To us engineer explained, that in that case it is necessary on the upper filling to place oak packing.

Dronov waved with his hand:

- It will do, whatever is built by man will be destroyed.

I approached those disputing and supported novice, and explained, how it is important to accurately maintain sizes/dimensions during the construction of a bridge, even a training one.

Before the evening roll call near the staff/headquarters I met the new commissar of the regiment Yakov Antonovich Shulyatnikov. We sat down on a bench. We chatted. I described to him about today's episode. Commissar attentively listened me and said:

- It is good, Pavel Alekseyevich, I will gather political instructors and communists, let us conduct work with the people!

Ya. A. Shulyatnikov into the regiment arrived recently instead of I. N. Katsnel'son. This was my first conversation with him.

Saying goodbye, Shulyatnikov shook my hand:

- And into this company tomorrow I will go myself.

On the second day in the subunits the conversations were carried out. Political instructors explained to soldiers, why we build and dismantle a bridge and sidings. I met Yakov Antonovich among the familiar carpenters. He told them about the anti-Communist axis Berlin - Rome - Tokyo. Someone of the soldiers asked:

What is it, this axis? Possibly, is it possible to do this: to break it in half?

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All laughed. His neighbor pulled down his overseaas cap over his eyes:

You do not know politics. This axis is not axle as in car, but a block. It is understandable?

- Is clearer than the clear, particularly - block ....

Yakov Antonovich thoroughly and intelligible explained incomprehensible words to Red Army men. His conversation Shulyatnikov finished approximately/exemplarily thus:

Thunderstorm clouds have thickened around our country. Each must

be ready to the resist the enemy. For this it is necessary to perfection to master one's military speciality.

In the alerts/alarms and the concerns almost two years of my service in the regiment unnoticeably flew by. Each summer we built branches and trained more than two thousand people, called to the retraining. The worn and crippled vehicles and mechanisms in winter were overhauled. In autumn regiment usually took an examination for combat readiness. For this from the Belorussian military district special commission arrived. Headed it section head of VOSO of district Colonel Anatoliy Fomich Funtov. Nothing slipped past his attention. These days were very strained. Special rifle and physical training was inspected/checked. Furthermore, on the shooting-range Red Army men passed norms for the badge "Voroshilov rifleman".On the athletics ground the tests were taken for the badge of GTO. Each dreamed to return home with the honorary badges on the breast. Badge holders enjoyed great respect with Soviet people. In combat, political and special training during the autumnal inspections/checks in 1936 and 1937 our regiment obtained evaluation "excellent".

In 1937 after autumnal inspection/check Z. I. Kondratyev was advanced to the post of the assistant to the division head of VOSO of district. They assigned me regimental commander. At first it was rather difficult. The knowledge, acquired in the academy, and the

practical experience, accumulated within the time of service in the regiment, rescued me. With a high feeling of responsibility the commanders and political workers did their duty. Party organization actively helped. The friendly work of entire collective brought its fruits. For the successes in 1938 academic year the regiment was rewarded with Red Challenge Banner of Belorussian particular military district.

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With a good mood we carried through 1938, we prepared for achieving new successes in 1939. But, as they say, the subordinates propose, and commanders dispose.

I did not know on that new-year night the fact that the higher commanders intend to determine my fate. The January leaflets of calendar rapidly flew off, and I thus once in the morning arrived at the staff/headquarters of regiment and, as usual, began to examine/scan the acted post office/mail. I suddenly see the letter order of the commander/chief of TsUP VOSO RKKA brigade commander A. E. Kryukov to the name of the commander of the 3rd railroad regiment ... Colonel P. A. Kabanov. "Why Colonel, am I not a Major? They were mistaken"! I read further: "Colonel P. A. Kabanov is appointed as the commander of the 5th railroad brigade of the special corps". It was

further to me proposed urgently to leave for the Far East into the area of station Manzovka, to be at the disposal of corps commander, brigade commander N. A. Posvirov.

To part from the regiment was difficult. But an order is an order! I gave matters over to Major V. P. Solovyev, warmly said good-bye to ~~the~~ my colleagues and through Moscow left for the new duty station. In Moscow from the station I phoned A. E. Kryukov. Aleksandr Yevdokimovich invited me to visit him. I arrived into the familiar white building on the street of Frunze. Office of the commander/chief of TsUP VOSO. I enter. Aleksandr Yevdokimovich firmly shakes my hand, he offers me a seat. Kryukov said that the situation in the Far East as before was very strained, were possible any provocations from the side of Japanese militarists. The units of the particular corps are assembled for the construction of railroads in the Far East. Strength of it 55 thousand people. Commands the corps experienced railroad worker - military engineer brigade commander Nikon Andreyevich Prosvirov. Deputy corps commander - my former commander/chief Z. I. Kondratyev.

Before the withdrawal of train from Moscow in the sleeping compartment tanned Colonel entered. He introduced himself:

Sergey Mikhaylovich Sergeyev. I rested in the south, I return to

the duty station.

We chatted. Sergeyev works in the special corps as the chief of a service of operation.

In ten days of route/path Sergey Mikhaylovich described much about the life and the affairs of the corps and 5th brigade, which for me it was necessary to command.

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I learned, that the brigade since 1936 builds railroad from Manzovka station (Sibertsevo) to the east to Varfolomeyevka station. Extent of the line 106 kilometers. The profile of route is difficult: the Taiga and the Sikhote-Alin' mountain.

We arrived into Vladivostok. The staff/headquarters of the corps here was located. I went to introduce myself to corps commander.

Stocky, short, with deep bald spots on grizzled head, Nikon Andreyevich Prosvirov appeared imposing. He met me sufficiently coldly. Upon saying sit down, he immediately began to tell about the brigade affairs.

- Railroad from Manzovka to Varfolomeyevka, he said, in essence was constructed and given temporary/time operation. With the coming of spring the brigade must begin to prepare route for the delivery in the constant operation. Lots of work ! It is necessary to lay the second layer of ballast. To construct everyday equipment buildings, housing, to strengthen subgrade. You cannot immediately enumerate in all. Now in winter your main problem - lumber stock. Annual plan - one hundred thousand cubic meters - brigade is obligated to fulfill in four winter months, i.e., per month to produce twenty five thousand cubic meters. More than half is already prepared/prefabricated and is exported. But before the coming of heat remained only one month - March. In March the brigade must fulfill monthly plan and eliminate debts. Problem is difficult! In order to solve it, today, without having left for the place, you should develop operational measures and correct schedule of procurement and removal of forest for each day. - After seeing on my face surprise, added Prosvirov: - I called here acting brigadier general of brigade Colonel Petrov together with the chief engineer of brigade Brykin. They already outlined some measures. You examine them and you will present to me for the confirmation/assertion!

Brigade commander invited to his place V. S. Petrov and S. V. Brykin and introduced us. Vladimir Sergeyevich Petrov was the chief of staff of brigade. Person is calm, is polite, efficient and

dependable. When we sat down around the plan, Brykin described to me about the character of cutting area, about the operational procedure (beginning with the felling of trees and ending with their shipment on the railroad march routes).

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We presented the corrected plan to corps commander. He affirmed it.

During the same day I saw, also, Z. I. Kondratyev. We met warmly as old friends. He promised aid and support.

The staff/headquarters of the 5th brigade was located in Manzovka. In that distant prewar time it was the small railroad junction, which operated in four directions. To the West from the station the settlement of railroad workers was located. Among its single-storey small houses the building of the house of culture stood out. V. S. Petrov pointed to the side from the station:

The creek of Manzovka there flows.

The vicinities of settlement appeared wild, thrown open to all winds. What still depressing did act on me? It is the silence - sad,

incomprehensible. But this feeling rapidly passed. In the unit bright, warm room and hot comradely rendezvous awaited me and the wife.

Next day in the morning I assembled the command element of brigade. Each briefly reported about the condition of affairs in his sector of work. Chief of staff Colonel V. S. Petrov described about the measures affirmed by brigade commander for the acceleration of lumbering. The commander/chief of the rear of brigade Colonel V. I. Aleksandrov introduced explanatory supplements into this plan. He reported, also, about the planned measures for an improvement in the way of life of personnel. A good impression on me produced the communication/report of the commander/chief of the production-engineering department of the chief engineer of the brigade of the military engineer of 2nd rank Serafim Vasilyevich Brykin. I liked his manner of speaking, to behave simply, and with dignity, to answer questions boldly and clearly. They say, the first impression is deceiving. It did not deceive me. S. V. Brykin became in all affairs of brigade my right hand. In our first conversation participated also the commander/chief of the political department of brigade regimental commissar P. I. Bakarev and his deputy battalion commissar V. I. Kamyshevtsev. They described about the organization of the party-political work in the subunits.

Our brigade procured forest for all units of the corps. It was occupied with this work already third winter. Within this time the soldiers and commanders mastered well technology and significantly improved technology of lumbering.

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The supervisory control of the motor vehicles, which delivered wood from the cutting area to the siding, had been organized. With the coming of frost they yearly laid branch directly on the soil from the taiga to Buyanka station. They here loaded forest on the platforms and they sent them according to the designation/purpose. Soldiers named this branch road-toiler.

With great difficulty at the beginning of April we finished lumbering. I reported to corps commander about the fulfillment of annual plan.

With the coming of heat we expanded the construction of housing and equipment. By plan it was provided for toward the end of 1939 to move entire command personnel of brigade into the comfortable houses. But were built these buildings for the railroad workers, who will arrive here for constant work. One after another grew along the railroad reeking of forest resinous freshness handsome log

structures. We raised them comparatively rapidly. The basic details of houses and outdoor construction were prepared previously on the construction court. They were prepared according to the standards generally accepted and developed by our engineers. On the spot the house only was assembled. Thus eight-apartment two-story house from square beams our carpenters elevated in 13 days, and four-apartment single-story - in 10 days. For that time these were high rates/tempos.

Plasterers and house painters were not sufficient since in the brigade of the Red Army men of this speciality we did not prepare. We issued the call: "House-painters - to your brushes, plasterers - to your trowels" ! Several tens of people answered. The special brigades of decorators were created from them.

The test succeeded. The quality of works increased, the level of labor productivity rose.

My first seaside spring approached. Battalions prepared for the defense from the high water the main track. Mounds, ice-cutters at the bridges were fortified. Ditches were cleared, highland channels, drains were made. They told me how in spring Taiga rivers and ravines became fierce. Therefore we were prepared for meeting the high water very fundamentally.

After several days crashed Sikhote-Alin' with its turbulent waterfalls. Land was freed from the snow, was warmed thoroughly in the Sun, it steamed. And the green lights of grasses yet did not shoot up on the hillocks, and already knocked our picks, scraps/crowbars, shovels. Battalions began the completing works.

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They added and fortified mounds, finished cuts, laid highland channels and drains, placed tracks on the second ballast layer, built loading-unloading areas/sites and water-supply point, placed station tracks.

I inspected route and involuntarily recalled Murmansk railroad. Here just as in those regions, stony mounds, cpovered with forests, mossy swamps/marshes. Wherever you look - everywhere thickening waves of the green ocean. And what is significant: we felt ourselves among this limitless extent not lost, helpless creatures, but masters .... Our hands laid steel track,we constructed the bridges over the rivers, the buildings of stations are raised, the wires/cables of communications/connection are stretched from one station to the next. The age long sleep of Taiga will be wakened by the whistles of steam

locomotives. To the great undertakings Soviet people are capable!

However, these victories were not easy. Equipment was not sufficient. Thus, brigade had only two excavators with the capacity of the ladle of 1.5 cubic meters. Excavators worked on the procurement of ballast of the rivers, and all earthwork were as before made by hand - by shovel and by wheelbarrow.

At the end of May I arrived in the sector of the 80th battalion. Commander Major M. S. Smirnov, resourceful, brisk, reported to me about the position/situation of affairs. And suddenly, to my surprise, he asked to increase for battalion job schedule in June. I was astonished. "It looks as if commander is being cunning. Possibly, we miscalculated something during the development of plan? - I thought. And here surmised, in what affair. For increasing the responsibility of commanders for the execution of plan and the quality of works the sectors of battalions were not redistributed, but they maneuvered with work force. Commanders did not willingly give their people into other subunits. Thus Smirnov requested me to increase plan to battalion so that all his people would work in their sector.

I made a face, that I didn't understand, and promised to immediately give supplementary mission. On the second day they placed

the company of the 80th battalion on the procurement of Shebura.

What is this Shebura and for what was it required of us? Shebura - these are the wastes of crushed stone, stone grit. We used it during strengthening of slopes. This question is important and deserves to say several words about it. The problem of strengthening slopes, mounds and cuts arose before the engineers even before my arrival into the brigade.

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By project and by estimate was provided for strengthening slopes by turf. But this is labor-consuming operation/process, and, the main thing, in the area of construction there was almost no turf. The idea to use Shebura belonged to commanders of 77th and 83rd battalions captain L. G. Bogatov and Major I. P. Seredin. S. V. Brykin verified the calculations of commanders and confirmed the advantage of their proposition. But many doubted the reliability of Shebura, since the experience of its use we did not have. They decided to conduct experiment. They strengthened by new method several slopes and ascertained that the new cover with its qualities is not inferior to turf. Thus, Shebura began to be used along the entire line.

Since then more than three decades have passed. Recently I met

an acquaintance, a Far-eastern civil engineer. We did recall also about Shebura, about our doubts and alerts/alarms: "how will it work in actual operation? " I inquired, how is our cover of slopes.

- Good, for long time yet it will serve!

... We kept very busy, but occured also hours of leisure. But all around Taiga. It was especially dully in winter. In those years there was no television, fewer the books, rarely it was possible to obtain a good motion-picture film. Red Army independent activity was a godsend. In it willingly participated the wives of commanders. In each battalion artists were located. Talents were revealed/detected, our political workers headed by P. I. Bakarev helped to select repertoire.

Each battalion had its club and circle of independent services. In the small circles, as a rule, there were dancing and choral collectives, the bands of national instruments, the elocutionists, vocalists. In the 80th battalion there was even the dramatic collective, which performed such classical plays as "On the bottom" of M. Gor'kiy, "Forest" of Yu. Ostrovskiy, the "Power of darkness" of L. Tolstoy. The soul of this collective, its artistic head was the wife of the chief engineer of battalion Natasha Savchenko, beautiful, charming woman. She had excellent voice, we listened to her after

holding our breath. "When you listen to Savchenko, said soldiers, it seems that taiga itself smiles, to work it becomes more easily". Each small circle, after preparing new repertoire, appeared with it in all battalions. Thus, we knew almost all our outstanding artists.

end section.

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National proverb says: "He who goes to the target, he will achieve it". We achieved our target - completed the construction of road. In the fall of 1940 the national commissar of lines of communication assigned commission for inspection/acceptance in the constant operation of the line Manzovka-Varfolomeyevka under the chairmanship of the commander/chief of seaside road G. I. Pertsev. Commission calculated the volume of work done by the 5th brigade on the line since the beginning of its construction. Such numbers were obtained. Extent of main track - 106 kilometers. Are constructed 11 transit stations and are layed 25 kilometers of station tracks. Are carried out earthwork - 2.8 million cubic meters. Are constructed 2 water-supply points, one of them - with the chemical water cleaning. Are raised dwelling space of approximately 8 thousand square meters. Are constructed 96 different artificial structures/installations (among other things one large bridge) and 4 average ones.

Commission recognized the quality of works as excellent. This construction was a great victory of the collective of the 5th brigade.

We just had time to finish celebrating our victory when I, the chief of staff and chief engineer were called to Vladivostok by N.A. Prosvirov.

This time he accepted us more cordially and even smiled. Nikon Andreyevich approached the large map/chart/card of seaside railroad hung on the wall of office.

- To you new, honorary mission! Is required to connect your road with the station Sergeyevka of line Vladivostok - Nakhodka. Pointer slid along the bold dotted line, which entered to the depth of taiga. Nikon Andreyevich continued:.

- Is formed a ring, parallel to the main direction/axis of Trans-Siberian main line. Operational length of new route one hundred and fifty kilometers. You will build it together with the fourth brigade. It will come to meet you from Sergeyevka station. Investigation and design of line is entrusted to Lengiprotrans. Obtain the necessary documentation in the staff/headquarters of the corps. Are there questions? No. You can proceed to execution of task!

We celebrated the 23rd anniversary of October and began to equip the group of engineers for reconnaissance of future route. Chief engineer of the corps Fedor Nikolayevich Doronin headed it.

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To it were connected S. V. Brykin, G. K. Popov, M. M. Savchenko and several more men. Route/path was difficult, complicated and dangerous. Entire future 150-kilometer route had to be passed through on horses through the mountains and the taiga without any communications (indeed then there were no mobile radio stations), relying only on oneself. Detachment took the seven day subsistence level, sleeping bags and all necessary equipment for the journey. For horses we selected Siberian species, calm, well broken in. We decided to begin march route from Sergeyevka station. We stuck entire equipment of detachment into coach and sent it by railorad into Sergeyevka.

We met detachment, as previously agreed, on the eighth day, on the shore of creek. Our travellers tired, unshaved, hungry, but satisfied, happy, moved out from the taiga. They put themselves a bit into order rested and all gathered in my office for a meeting. Fedor Nikolayevich Doronin looked on us with his clever eyes and asked:.

- Acknowledge honestly, who has not read Vladimir Klavdiyevich Arsen'yev?

All kept silent.

- "Dersu Uzala", "In the Sikhote-Alin' mountains", "Through the taiga" - remarkable books. Read, who has not read them ! We hacked through the untrodden thickets almost on the trails of this remarkable traveller. Thus now I felt each of his lines.

Someone noted:.

- For us Sikhote-Alin' is not discovery. We live in its embraces!

F. N. Doronin parried:.

- Now we have been convinced by our own experience: to live and to know - concepts different ones.

- The first day, began his story F. N. Doronin, began well. From the sky smiled the Sun, all around - silence, paradise. And suddenly I feel on my neck crawls "dear" familiar mite. But gnats in the evening attacked. We lighted campfires, with smoke we drove off a bit

the "parasites". We fell asleep. The second day also passed happily, continued Doronin, we passed the night at the foot of main ridge. We in the morning began its assault. Thus here we learned, what read Sikhote-Alin' is. Ice-covered steep slopes, snowdrifts, hurricane wind whips with "snow granules" as with shot. Each step - torture!

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Doronin described, how two days our pathfinders stormed the pass. The march/passage of the new main line through the pass the control of the corps passed to make as a tunnel. Scouts produced the examination/inspection of terrain. On the fifth day the group went down into the river valley. Again: the Sun, the heat! Finally they reached the large village Anuchino Slovka. In the years of civil war and American-Japanese intervention this village was the center of the partisan movement of Primor'ye. Inhabitants met scouts warmly, treated them with pelmeni. They knew that to them people arrived, who will lay rail road through the mountains and the taiga! Who of us could think then that this plan would not be carried out, road would not be constructed.

During three cold winter months we succeeded in hacking openings, laid on them winter motor-and-animal roads. At the station, where the 84th battalion was located, they organized the base of

building materials. Rails, ties, attachments left there.

In one of the first March days of 1941 I obtained the order of corps commander for brigade to be relocated to the L'vov railroad. To begin there the construction of alternate tracks in the sector Lanovtsy - Ternopol' - Berezovitsa - Ostrov - Polutory - Khodorov. Extent of the sector approximately 200 kilometers. To staff/headquarters it was ordered to be placed in Zbarazh city.

Again military fate threw me to the West. During the same day regarding the relocation into Manzovka from Vladivostok N. F. Doronin arrived. He described that the 1st and 4th brigades and the control of the corps simultaneously with our brigade were being moved. In the Far East remain two brigades: the 3rd and the 7th. To command them will be the deputy commander of the corps Colonel Nikolai Vyacheslavovich Zverev.

On the transportation of our units to the West there was the special resolution of the central committee of the party and government. In 1941 the NKPS assigned for the reconstruction of L'vov and Vinnitsa roads, to the construction of new lines and alternate tracks more than 200 million rubles. The 1st brigade (commander A. P. Smirnov) had to construct the alternate tracks, increase stations and units in the sector Grechany - Yarmolintsy - Gusuatin - Kopychintsy -

Byala Chertkovska.

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The staff/headquarters of this brigade was placed in the city of Chertkov. The 4th brigade of M. T. Stupakov was ordered to develop stations, build the alternate tracks and the detours of railroad junctions Shepetovka, Krasne, L'vov. Its staff/headquarters was placed in the area of station Krasne.

During the same day I obtained the telegraph message from N. A. Prosvirov. He ordered me to immediately send the operations group of commanders and engineers headed by S. V. Brykin to Ternopol', Operations group was directed to the command of the new chief of staff of our brigade Colonel Vasiliy Sergeyevich Miridanov. At this time he was found on the West and already took up the execution of his responsibilities. Our old chief of staff Colonel V. S. Petrov was transferred to the work in the 13th brigade. Operations group had to on the spot establish/install communications/connection with the control of L'vov road and to prepare everything necessary for the quartering of the units of our brigade. After several hours to the group of Brykin we wished good trip and successful execution of tasks.

Five days and nights I dealt with the shipment of trains. Route/path was not close by - about 10 thousand kilometers. To this distance thousands of people with the weaponry and the equipment, the construction vehicles and the mechanisms, the transport were transported. Simultaneous relocation of three railroad brigades gave the possibility to verify the mobilization readiness of a number of our railroads. The NKPS together with TsUP VOSO developed the special plan of rapid loading and unloading of our trains. Their movement was organized according to military schedule. How precise this operation/process proceeded, the following fact speaks. Immediately after the shipment of the latter/last train of brigade I left from Manzovka by express train. As far as Moscow I did not overtake a single train. Railroad workers excellently managed assigned mission.

In Moscow the operations group of the particular group of the railroad troops/forces was located. Headed this group Colonel Aleksey Kirillovich Kesayev. From him I learned, that in the reception room of the deputy of Peoples Commissar Ilya Davydovich Gotseridze was N. A. Prosvirov. He rang him on the telephone. Nikon Andreyevich explained to me that Ilya Davydovich leads the construction of new roads and he proposed us to come to a reception for him.

Gotseridze accepted us cordially. In detail he questioned about the construction affairs in the Far East and the course of the relocation of brigades. Then Ilya Davydovich described about the condition of the railroad system of the Western Ukraine and Western Belorussia.

- Performed the Red Army rapidly, without the operational pauses. Railroads are not destroyed, but it's no occasion to be happy. Route/path is worthless, the capacity of lines low. Hope is on you! - said in conclusion Gotseridze.

The hand of clock on the turret of the building of the people's commissariat, when we moved out to the street, showed two o'clock at night. Snow recently fell, and wide square was as if covered with white tablecloth. The enormous gray building of Peoples Commissar all glowed and resembled an ocean liner swimming in the night. On the masonry front we did not see one "blind" window. Entire apparatus of the NKPS was at its work sites. Nikon Andreyevich shook his head, he sympathized:.

- Martyrs ! There is rest for them even at night!

I and Ilya Davydovich did not then know that no longer could we justify the large hopes laid on the railroad troops/forces. Up to

1939 our railroads were ready for mass mobilization transportation. They could let pass to the western boundaries two and one-half times more trains, than the main lines of Fascist Germany. However, after 1939, when Western Belorussia and the Western Ukraine, Bessarabia and North Bukovina became Soviet, entered the Union of Soviet Socialist Republics Lithuania, Latvia and Estonia, the situation changed. Here transport system was weakly developed and did not provide mass transportation. In order to develop it to the necessary capacity, were required two years and 9 billion of capital investments. But the NKPS held up the beginning of works on the reconstruction of near-boundary railroad lines. The fact is that on them were 120 thousand cars and 2 thousand steam locomotives of West European track, and people's commissariat strove as long as possible to exploit this rolling stock.

But the increasing danger of the attack of Fascist Germany imperatively required the increased mobilization readiness of new near-boundary main lines. How these missions were accomplished by government, to me at that time it was unknown.

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Are now published documents and memoirs, in particular the book of G. K. Zhukov "Recollections and reflections" and I. V. Kovalev's

"Transport in the decisive operations/processes of the Great Patriotic War", in which there are pages, which answer these questions. In his memoirs G. K. Zhukov says, that at the end of February of 1941 he together with the Generals N. F. Vatutin, G. K. Malandin and A. M. Vasilevsky thoroughly reported to the national commissar of defense S. K. Timoshenko's about the condition of near-boundary rail, main and dirt roads. On the situation of affairs on the railroads reported to Peoples Commissar N. F. Vatutin, who described that the near-boundary railroad areas were little adapted for the mass unloading of the troops/forces. The railroads of Germans, which go to the border of Lithuania, have the capacity of 220 trains in a 24 hour period, and our Lithuanian road, which approaches the boundaries of eastern Prussia, only 84. Situation in the territory of the western regions of Belorussia and Ukraine it is no better: here we have almost half the railroad lines, that the enemy has. The railroad troops/forces and the construction organizations during 1941 clearly cannot fulfill those works, which must be carried out.

In response the Peoples Commissar noted that in 1940 by assignment of TsK VKP(b) the people's commissariat of lines of communication developed the seven-year plan of the technical reconstruction of western railroads. However, thus far nothing serious was done, except the altering of tracks and elementary works

on the adaptation of railroad structures/installations for loading and unloading the mass of the troops/forces and armament [1].

FOOTNOTE [1]. See G. K. Zhukov. Recollections and reflections. M., APN, 1971, page 199. ENDFOOTNOTE.

The party and the government immediately took all measures in order to remove the revealed deficiencies. Transportation from the Far East to the territory of Kiev special military district of 1, 4 and the 5th brigades of the special group of the railroad troops/forces was one of such measures. Furthermore, in the near-boundary districts besides the available there individual railroad regiments were formed eight new brigades, directly subordinated to the People's commissariat of defense. All these brigades and regiments were directed toward construction and reinforcing of near-boundary roads of defense value.

The perfidious attack on our country by Fascist Germany prevented the completion of the planned works.

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But, jumping ahead, I will say that as a whole the Soviet rail transport was solidly prepared for the war and it withstood a titanic

load. I. V. Kovalev in his book "Transport in the decisive operations/processes of the Great Patriotic War" writes: "By 1 July, 1941, by the armed forces was mobilized 5.3 million people. To the points/posts of concentration were delivered, mainly, by rail transport 291 rifle divisions, 94 rifle brigades and more than 2 million people of draft units. Simultaneously was transported a large quantity of supplies, mainly ammunition, fuel, military equipment" [1].

FOOTNOTE [1]. I. V. Kovalev. Transport in the decisive operations/processes of the Great Patriotic War. M., Publishing house "Knowledge", 1969, page 9. ENDFOOTNOTE.

The evacuation of population, enterprises, valuable armament was successfully carried out to the east.

While in the first imperialist war the railroads of Russia expended two months on the troop concentration, then during June 1941 Soviet railroad workers did analogous, but much greater work in volume in one week.

All this became possible because of the successful execution of the pre-war five-year plans, which converted our native land into the powerful industrial power. Soviet locomotives FD, SO and IS were the most powerful, and the newest steam locomotives in the world. By 1941

the rolling stock was considerably intensified. The load capacity of car and general/common/total pulling power of the steam-locomotive of motor pools exceeded the level of 1913 two times. From 1922 through 1940 there were constructed more than 20 thousand kilometers of new railroads, of them about 3 thousand kilometers in the western part of the Soviet Union. All branches of railroad facilities and management were radically renovated. Different became railroad workers themselves. In the years of the Soviet regime grew a new generation of people, educated by our party limitlessly dedicated to Leninist ideas, mastering technology to perfection. Each fourth railroad worker was communist or Komsomol member. Stakhanovite-Krivonosovs composed half of contingent. All this allowed the railroads of our country in 1940 to transport cargoes 6 times greater than in 1913.

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... But let us return to our narration.

Moscow - L'vov - Zbarazh. The latter/last stages of my route/path from the Far East are such. I met Zbarazh with wet snow with the rain. It dazzled the eyes, with slender ice streams it spread on face. This small, nothing remarkable district post in the distant past was the witness of important historical events. Behind the creek Gnezne on the hill stands ancient castle. It is mentioned

in chronicles of the XIII century. At the walls of castle the soldiers of Bogdan Khmel'nitskiy conducted mortal combat with Poles for the liberation of the native earth/ground.

On the day of arrival I was introduced to the secretary of the district committee of the party and to the chairman of district executive committee. They met me cordially, They helped to place command personnel in comfortable houses.

Trains soon to the station began to arrive. When latter/last train arrived, I reported to General N. A. Prosvirov on the telephone in L'vov. He, after listening to me, whispered something to himself, calculated and said to me:.

- Fine people are railroad workers!

Battalions on the move were included in the work. For break in work to us was not given a single hour. Plan is enormous, times are hard. Design documentation is not yet ready. True, government went halfway - it permitted beginning construction without the projects and the estimates.

In one of such hot days in my office telephone call was heard. The familiar voice of Serafim Vasilyevich Brykin from somewhere from

a distance in the tube was heard. The chief engineer of brigade led the tracing of the detour of the Ternopol' junction and station Berezovitsa Ostrov.

- What to do? - Brykin asked me on the telephone. - They clashed with the capitalist formations. We forgot, that here the earth/ground is still located in the private property. We do trace, do drive in pegs, approach several local residents and they ask: "On what base do you drive in pegs? This is our own earth/ground, and without our permission you nothing on it have a right to build".

- Nothing you will do, I answered, it is necessary to pay for the earth/ground. You cannot offend the peasants. Go to the administration of the L'vov road.

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Agree there with the leadership about the order of the formulation of the ground for the alienation and the payments for it. Heads of road here are owners and the managers of credits.

Detour around the Ternopol' juunction is five kilometers by length, and owners of land are many. Almost two weeks jurists and bookkeepers for the administration of road were occupied with them.

Finally were paid to the majority of the owners the money, and we obtained the possibility to begin the construction of line.

What construction technology did have available then brigade? We had five diverse excavators. Every excavator, is unique item: its technical data, its spare parts, its technology of repair. Moreover, they worked on different fuel. But with the fuel, as with the spare parts, it was bad.

We placed excavators in the most difficult sectors. Such sectors were the detour of station Berezovitsa Ostrov and fill of approaches to the bridge through Gluckhaya valley, that is located on the stage between the stations Berezovitsa Ostrov and Potutory. Here for the construction of the alternate track was required to errect tall 30-meter embankment. Certainly, five excavators could fulfill only the small part of earthwork most labor-consuming for the construction of railroad. And although we helped out with all our other equipment: scrapers, sledges, excavators, motor vehicles, nevertheless more than 70 percent of the earth/ground it was necessary to turn over by hand, to transport on wheelbarrows.

With each day the brigade increased the tempos of works. The first kilometers of finished alternate tracks appeared. During April our plant of reinforced concrete constructions/designs produced the

first production. It was serviced by the 31st bridge battalion. Plant had its mobile electric generator, concrete mixers and transport means. Thought-out technology and clear organization of labor/work provided the high level of the productivity of assemblies. Plant supplied a considerable quantity of finished span structures and blocks for construction. At this time construction courts and equipment repair shops began to work.

Thus, affairs in our brigade went well. People worked with great enthusiasm.

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Worthy of a good word was also the brigade of engineers-designers of the institute of Kievtransproyekt, which was headed by the deputy of commander/chief of institute, Vladimir Dmitriyevich Milen'kiy. Within the short time the brigade developed the projects of the reconstruction of Ternopol' junction, number of transit stations and completed project and estimate of laying the alternate tracks in the sector Lanovtsy - Ternopol' - Berezovitsa Ostrov - Potutory - Khodorov. Especially much energy gave to this work the commander/chief of the design department of brigade the military engineer of 2nd rank G. K. Popov.

Detour around the Ternopol' junction built the 82nd battalion. On one of the days I arrived at this battalion, I look, and embankment here and there is interrupted/broken. I ask the commander of the military engineer of 2nd rank V. P. Baykov:.

- Why such breaks?

- Owners do not want to sell the earth/ground.

We went to one of such owners, we ask:.

- Why you do not sell the earth/ground?

- Land - benefactress, and money - water. Today you have it, and tomorrow its gone.

We visited the farmstead of another stubborn fellow. Hut - broken down, roof is straw. On meadow graze skinny horse, cow, three sheep. Here are they, the vestiges of the cursed past!

We expended almost three days on the persuasions of owners. But indeed each missed hour was for us very expensive. We knew that on the boundary it is restless and it is necessary to be ready for everything. In the brigade they increased training of demolition men,

increased the combat readiness of units. True, no concrete/specific/actual instructions more on this score entered. Combat readiness of 77, 82 and 84th construction-path battalions I inspected myself. The military engineer of 2nd rank Vasiliy Petrovich Baykov commanded the 82nd battalion, as I already said. Was located battalion at the station Berezovitsa Ostrov. The 77th battalion commanded captain Gennadiy Dmitriyevich Bogatov, and 84th - military engineer of 2nd rank Georgiy Mitrofanovich Litvinovich. These battalions were located in the village of Kurniki. Personnel of these battalions raised subgrade under the alternate track from Zbarazh station in the direction of Ternopol'.

Checking showed that the commanders correctly understand their combat missions and support full combat readiness in the units. Both Baykov and Bogatov, and Litvinovich asked me:.

- Why to the battalions do not consolidate the definite sectors of tracks in the case of the organization of obstacles?

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- Obviously, the military district does not see need of this.

What could I say to commanders? They complained, also, about the

absence of the reserves of explosive.

- In the case of misfortune there is nothing to destroy structures We sent claims for explosive to the district, but they almost always were not satisfied.

Summer advanced. We settled in at the new place, and to the commanders families began to arrive. I decided to bring family. I called on the telephone N. A. Prosvirov and asked permission for several days to take a trip into Leningrad after the family. Nikon Andreyevich permitted. I went into Leningrad through Moscow. In the train already not far from the capital I learned about the perfidious attack on our country of Fascist Germany. What to do? To return or to go further? I decided to confer with Z. I. Kondratyev, who at this time worked already as the deputy commander/chief for the central division VOSO of the RKKA. Directly from the Kiev station I left for his apartment. Zakhar Ivanovich, as one would expect, was not home. He recently arrived from the western boundary and directly from the train was directed to the people's commissariat of defense. I rang at work Kondratyev, he said that in an hour he will be home. However, Zakhar Ivanovich ordered for me ticket on the first train exiting from Moscow in the direction of L'vov. IN one-and-a-half days, on 24 June I was again in Zbarazh.

In the control of brigade small operations group operated. Deputy chief of staff Lieutenant Colonel V. V. Yagodin and commander/chief of the rear of brigade Colonel V. I. Aleksandrov headed it. Chief of staff Colonel V. S. Miridanov together with the division head of political propaganda regimental commissar P. I. Bakarev left for Sambor station. There they on the order of the commander of the southwestern Front provided the work of near-boundary railroad sectors.

The chief engineer of the corps Colonel F. N. Doronin soon in the control appeared. Tired, with the red, swelled from insomnia eyes, but cheerful, excited:.

- Recently from Ternopol. I was there in the staff/headquarters of the southwestern Front. The commander/chief of VOSO of district Colonel Korshunov called me. Your brigade operates in zone of 12, 26 armies.

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To the brigade is attached the line Peremyshl' - Khirov - Sambor - Stryy - Potutory - Berezovitsa Ostrov - Ternopol' - and frontier sectors: State border - Turka - Sambor and State border - Lavochne - Stryy. Your job is to protect these lines, and in the case of retreat

to destroy them. The sector Peremyshl' - Khirov - Sambor the 77th battalion already services and prepares for the erection of obstacles. Sectors State border - Turka - Sambor and State border - Lavochne - Stryy - 79th battalion, and the sector Sambor - Stryy - Khodorov - 84th battalion.

The fate of heavy equipment greatly disturbed me. Indeed to the disassembly, for example, of excavator "Kovrovets" was required five-six days. Therefore I did ask Fedor Nikolayevich, is it possible to demount it and to send it into the rear.

- In no case, answered Doronin, war soon will end, and we will again be occupied with our business.

We did think then that in several days we will obtain the order of corps commander urgently to dismantle/select and to send heavy equipment into the rear and we will do this with great difficulty. By the way, during the same day they sent the column of motor vehicles with the families of commanders into Kiev. After finishing affairs in the staff/headquarters, I together with V. I. Aleksandrov and engineer of staff/headquarters G. K. Popov in the evening left for the station. Railway inspection trolley here us awaited. We sat down in it and went to Stryy towards the war.

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FIERY RAILS.

It was a short June night. All around everything lurked, died. Only the roar of the motor of our trolley disrupted the before-dawn silence. Semaphores glow as if squinting. We go half-blind. Behind the window the dark contours of station construction sail past. From the platforms flicker to us with green flashes the signal lamps of assistant stationmasters. Flashed past Ternopol, Berezovitsa Ostrov, Potutori. Trolley again moved out into the opened field. And here we saw the burning settlement. Another fire to the right flared up. In the sky fire columns were tossed up. The sounds of the exploding bombs were heard. Driver Lantsov stopped the trolley:

Animals, Khodorov they tear to pieces. It is obvious, they set fire to oil base. It is necessary to wait out bombing, we can fly into the scorching heat itself.

When Fascist aircraft flew away, we moved further. The

settlement and Khodorov station burned. The bright light of flame/blast fell on the rails. They sparkled and as if molten they played all colors of rainbow. Painting to the route/path, Georgiy Constantinovich Popov yelled:

- Look, rails are on fire !

Before us ran forward two glittering steel ribbons. Impression was created, as if we actually/really go on igneous rails. Trolley stopped at the platform of station. Fresh crater nearby turned black, on the adjacent routes/paths the cars with the cargo blazed. The soldiers of our 79th battalion together with the railroad workers unhooked trains. Steam powered switch engine took out to the stage the train not damaged by bombing.

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Assistant stationmaster met us.

After giving report, he asked permission to absent himself for several minutes:

- House burns, there are children!

- Run!

Popov looked after him:

- Real railroad worker! His house burns, but from the post he does not depart!

In Khodorov the subunit of the 79th battalion for the completion of the economic affairs of its unit was left. I invited over senior commander. A tall elderly person in several minutes from under the cars came out. Face is sweaty, covered with carbon black. Overcoat singed, smokes. He introduced himself.

- The commander/chief of the transport driver-stores service, the quartermaster of the second rank Kiselev. Battalion with commander Smirnov left to its sectors Gosgranitsa-Sambor and Stryy-Lavochne.

Kiselev reported about the destruction of station tracks. He assured, that if the raid is not repeated, then in the morning they eliminate the consequences of bombing. To me it was important to learn, how battalion met the war, how did behave under fire of enemy the, soldiers and commanders, what is their mood?

Kiselev described that with the first raid of Fascist aviation suffered our company, which stood in the outskirts of Stryy. It was early morning. People slept. Unexpectedly was heard the hum of aircraft, the screech of the falling bombs, explosions. Ten people were killed, twenty five are wounded.

I learned that in the first morning of the war above Khodorov station our antiaircraft gunner shot down German aircraft. The "Junkers" crashed on the four-axle car, in which the cases with the grenades were located. Flames instantaneous encompassed up to ten cars. But to put out fire prevented car with the granades. They were packed into the cases, by bundles. Bundles in proportion to heating exploded. During the explosion in different directions the fragments flew away. To approach close to the car was impossible. But indeed fire could move to other cars, loaded with ammunition. Disregarding danger, to the train went the soldier N. I. Khoperetkov. He disengaged the surviving cars. Steam locomotive pushed them to the stage.

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At this time the restoration train approached, which the deputy commander/chief of station Stryy A. I. Kravchenko drove. The group of train together with our soldiers put out fire. We succeeded in saving

part of the grenades, also, in the burning car.

Kiselev reported, that commander Smirnov organized the special detachment of miners. As commander of detachment was assigned Senior Lieutenant M. Ya. Bobrov, deputy commander of political affairs - the political instructor of company I. P. Varlam, as chief of staff - Senior Lieutenant V. R. Vask, as technical supervisor - military technician of 2 rank P. A. Frolov. For the detachment they equipped the special mobile detachment: steam locomotive, several covered cars, motorized hand car with platforms. Mobile detachment will ensure mobility to detachment. Miners can rapidly inspect the exploded structures/installations and arrive to the distant objectives.

Was formed also second detachment with the mobile detachment. Smirnov took upon himself command element of this detachment. Detachment left for the sector Gosgranitsa-Lavochne-Stryy. Mood of the soldiers and commanders is militant. This means, our soldiers and commanders were not lost, the fighting spirit of soldier-railroad workers was high.

Trolley dashed forward. Already it dawned. The third alarming night of war passed into nonexistence. The station structures of Stryy appeared in front. Trolley stopped, I was met by assistant

military commandant of Stryyskiy squad, Senior Lieutenant V. I. Ivanov. We went into his office. I had to get an explanation of the situation, discuss with the chief of staff of brigade and the commanders. Battalions are located at boundary itself, in the zone of combat. It was disturbing that they threw them in the unknown sectors. Engineers did not know even the key structures/installations, which in the case of retreat must be exploded first of all. Subunits are not provided with explosives. With what will we place obstacles?

I called Sambor on the telephone. At that place was the staff/headquarters of brigade. In the tube is heard the familiar voice of Vasiliy Segeyevich Miridanov. He reported, that our battalions operate in the defense zone of the 12th and 26th armies. There is communications/connection with the staff/headquarters of the 26th army. Our representatives there are located. They inform about the position/situation on the front.

- Which does do now seventy seventh battalion?

- They advanced to the cover of the head sector of Peremyshl'-Sambor.

The third company of captain M. S. Shirshov operates at the Peremyshl' station under the fire of enemy. Vasiliy Sergeyevich described to me that the station tracks there go near the river San. On the left shore - Hitlerites. At the station on the eve of war a large quantity of steam locomotives and loaded cars was amassed. Fascists continuously fire on station routes/paths and bridges in order to prevent us from removing this rolling stock into the rear. Germans destroy bridges with accurate artillery fire, and our people restore them. At the distant bridge through the dry valley, which is located out of the zone of shelling, the enemy threw aviation. Recently company repelled attack of the German submachine gunners infiltrate to the bridge.

With the aid of station communications/connection it was possible to be connected with the staff/headquarters of the 79th battalion, which was located in Lavochne. To the telephone Major M. S. Smirnov approached. He reported:

- yesterday the detachment of miners obtained from the commander of the one hundred ninety sixth rifle division a strange written authorization and plan for the setting up of obstacle.

- Why strange?

- Instead of destroying of large/coarse objectives, he proposes to dismantle two military spurs and to destroy the line of communications, and that only from the state border to Turk. It is very bad/poor with the explosive. Division engineer reluctantly gave out a half ton of trotyl. He says: "no more, we are not preparing to retreat. Today, true, they found a little explosive in the Turk quarry. So far we manage with explosives, and what will be further, I do not know ..."

Into Ivanov's office at this time came the commander/chief of the Stryy squad of movement A. I. Bogdanov. He agitatedly pronounced:

- Evacuation ! I obtained the order of the commander/chief of L'vov road to immediately send people into the rear.

The communication/report of Bogdanov stupefied me. In the head there even arrived the thought: and is not this a provocation? I began to persuade the railroad worker:

- You cannot leave. Think: the Stryy junction, through which the Peremyshl', Khirov and Sambor go. In front of us is the Sambor squad. All its people on the spot. It means, we will leave our comrades in

the misfortune.

- but an order is an order ! - answered Bogdanov.

- And who gave it to you, did you verify it?

Section head amazed looked at me and sat down at the table.

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I asked the communication center to call the administration of L'vov road. Telephonist answered, that with L'vov there is no communications/connection. It is possible to talk with Sknilov. This prejunction station is eight kilometers from the city. I am connected with Sknilov. Assistant stationmaster communicates:

- L'vov in haste is evacuated. German aircraft continuously bomb city. To us it is categorically forbidden to send to the unit trains.

I did ask Bogdanov:

- You are now certain that the order was obtained precisely from the commander/chief of road?

- It is similar to a provocation:.

Railroad worker thought. In order to finally calm him and to refine situation in the sectors, again I ring in Lavochne to Smirnov.

- One hundred ninety-sixth division, reported commander, obtained order to withdraw into the Drogobych area. It is allowed for the detachment of miners to place complete obstacle in entire sector from the state border to Sambor. I with the mobile detachment will leave for my sector. What will be the instructions?

- Carry out your missions! Keep constant communications with me.

After replacing the receiver, I did turn to Bogdanov:

- Are you convinced now that the approaches to Stryy by us are controlled? In the case of a breakthrough of Hitlerites we will be immediately notified.

After calming down, Bogdanov went home. I permitted him to send into the rear the train with the families of railroad workers and ordered him to prepare and to form the composition of the empty car, which was to be kept at the station with a steam locomotive in complete readiness. Bogdanov made the necessary inquiries, which

confirmed my assumption: hostile scouts manufactured the order of the commander/chief of road for the evacuation of squad.

From the West to the station the trains continuously entered. They went one after another with the small intervals, infinite caravan. All routes/paths of this relatively small unit were filled to capacity. Each train accepted it was necessary to immediately push forward. But where, to what direction? Trains evacuation, formed in a hurry, without the documents. I conferred with Bogdanov and Ivanov. They decided to send trains on the "red pass" in two directions: to Ternopol and on Stanislav (now Ivano-Frankovsk).

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Third direction to in L'vov is cut off by fascists. Toward evening we learned that they surrounded the city and occupied Sknilov.

While we adjusted reception and shipment of trains, on the line of Gosgranitsa-Sambor the mineblasting detachment of Bobrov placed obstacle. Technical supervisor Frolov together with his assistant, enthusiast of mineblasting, senior technician Lieutenant Litvinov prepared for the explotion and exploded large stone Syankinsk viaduct. Viaduct near Turk station was the second large/coarse structure/installation in this sector. Detachment placed explosive

into the vulnerable parts of structure/installation and destroyed it. At dawn on 25 June P. A. Frolov with several soldiers left on the trolley to the state border for the disposition of the staff/headquarters of the 196th mountain rifle division. It was necessary to obtain mission from its command element. Everywhere the troops/forces were removed/taken from their positions and departed in the direction of Turk station. The staff/headquarters of division was also not there. To the trolley unknown quartermaster ran up and he asked Frolov to explode fuel depot.

- I am the commander/chief of depot/dump, agitating, quartermaster spoke. - I cannot give to fascists the aviation gasoline. You understand, I cannot! If for this they do not shoot me, then I myself will put a bullet into my forehead !

- Is it far your depot/dump?

- A half kilometer from here, not more. Near the switching track Sokolik, in the mountains. Order to the retreat is obtained. To me is given instruction to destroy fuel, and how I will destroy him? Help us, you specialists, for you it is nothing to explode it !

- I will explode it, and then myself - to the response! - said Pavel Andreyevich. - Agreed, write to my name statement with the

request to explode depot/dump. Nevertheless document will be in the hands!

Quartermaster took out his notebook from the plane-table and rapidly wrote statement. Within fifteen minutes the trolley approached the entrance into the underground depot/dump. Quartermaster indicated to Frolov the warehouse:

- Here gasoline for the whole army it was prepared ....

Containers were thoroughly camouflaged. Pavel Andreevich with soldier N. P. Gorbachenko and Chief V. S. Petrichenko rapidly established/installed small charges, stretched the Bickford fuse and set fire to it. They ran for cover.

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Muffled underground explosions were heard. Enormous flame shot up out to the surface. The long mane of dense black smoke stretched itself to the mountain peaks. Petrichenko looked to the flame/blast:

- Gasoline - product bright, and it burns with red fire as tar.

Nikolai Gorbachenko shook his head:

- from the fume sky turned black.

The enormous burning stream spread along the low place in the direction of boundary.

Demolition men hurried back to Turk station. Here near the engineer depot Frolov met the familiar division engineer, from whom only the day before yesterday with such effort it was possible to get a half-ton of explosive. Now he became kinder. He allowed Pavel Andreevich to take whole ton of the trotyl:

- blast/undermine/blow up everything which is planned. We retreat to Drogobych.

After obtaining explosive, detachment exploded tunnel in Turk station. After this the mobile detachment and trolley with the trailer dashed in the direction of Sambor. After withdrawing with our troops/forces, detachment annihilated several station oil bases and depots/dumps of lumber, food and clothing and equipment depot, magazine, three warehouses. The advancing/attacking enemy obtained the heaps of ruins only. On one of the stations near Sambor the depot/dump of weaponry and ammunition was located. Before exploding

it, demolition men loaded the cars of mobile detachment with ammunition and with the new self-loading rifles of "Simonov's system".

On 29 June, 1941, we obtained the special directive of the central committee of the party and Soviet government. In it the full-scale program of struggle with the Fascist aggressors was presented. The TsK [CC] of the party and government required of the party and Soviet organs of frontal regions to organizationally conduct mobilization, to take all measures for the rapid advance of transports and trains with the troops/forces to the combat areas. In the directive it was simultaneously indicated that "with the forced withdrawal of the units of the Red Army to drive away movable train, not to leave to the enemy not one steam locomotive, not one car, not to leave to the enemy neither kilogram of wheat nor liter of fuel". To destroy everything that cannot be removed or used. We immediately notified all subunits of brigade of directive.

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Above Sambor, Lavochne and Stryy German aircraft scattered leaflets. In them the Hitlerites proposed to demolition men to end their "barbarous" activities and to surrender to the captivity. Otherwise the Germans promised all miners to catch and to hang them.

It means, enemy already felt the work of our demolition men on his skin ! It is obvious; therefore was increased the activity of the saboteur parties of fascists. Thugs fired on soldier-railroad workers from behind the junction, they attacked single soldiers and commanders. Bobrov's detachment neutralized one of such groups at the Drogobych station.

Mobile detachment and trolley approached this station. Along the route/path the wooden houses of settlement flashed. On porch of one of the houses elderly man stood. After seeing Soviet soldiers, he frightened rushed into the house.

- Why did he rush away from us? - was astonished Chief Gordeyev.

- Something here is not right!

- Let's go check! - ordered Chief and he jumped off from the trolley.

After him the soldiers jumped out. They approached the suspicious house. To the knock no one answered. Door was from within closed. Soldiers pressed from shoulders - it does not yield. It is obvious, it is blocked with something heavy.

- Strike it with butts ! - ordered the Chief.

They hit at once - door with the crash/grating flew open. Chief Gordeyev first into the house broke. Carefully he glanced into the empty, littered room, and hailed:

- Who's here, emerge !

In the room silence.

Behind the linen curtains the entrance into the semi-dark pantry. Chief stole up to it, he glanced and here he recoiled. He noted in the corner of the pantry a tall person with two pistols in the hands. Shots began to thunder. Gordeyev directed his self-loading rifle toward the curtains and gave several bursts. In the pantry the noise of the falling body, cry was heard. On the floor a man in the overalls lay/rested. Soldiers disarmed him.

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Under the overalls of the unknown person was the form of German officer. In the shed the demolition men disarmed four additional thugs. It was explained that the owner of hut just in case stood on guard. Thugs considered that the Soviet troops/forces left from the

city, and they awaited fascists. After seeing soldier-railroad workers, guard was lost. He was so frightened that with his conduct he gave away himself and hiding in the house saboteurs. So by the soldiers of our brigade was caught the first Fascist officer and saboteur party was disarmed.

Later from our State Security Agents we learned, that even during the first day of war this officer-fascist was dropped into Drogobych with the parachute for the leading of the saboteur party.

I greeted the morning on 1 July at the station Stryy near a telephone set. From all directions the commanders communicated about the condition of affairs in the sectors. Battalions dismantled the armament of factories, plants and railroad, loaded it and they sent it to the rear. Obstacles simultaneously were placed. From minute to minute from Sambor was to arrive the staff/headquarters of brigade to Stryy. Position/situation at the front was difficult From the situation reports of the staff/headquarters of the 26th army I learned, that the rifle divisions and border guards retreat. Several days ago in area of Lutsk, Brody Rovno ended a large tank battle. From both sides in it about 2 thousand tanks participated. This battle detained the offensive of Germans a whole week, spoiled their concept of the encirclement of the main forces of the southwestern Front in L'vov area. On 30 June the southwestern Front obtained order

to fall back to the line of fortified areas on the old state boundary - Korosten', Novograd-Volynskiy, Proskurov (now Khmel'nitskiy).

In second half of the day on 1 July to the Stryy station the trains of the staff/headquarters of brigade at long last arrived. With gladness I embraced V. S. Miridanov and P. I. Bakarev. Indeed I did not see them from the day of departure to Moscow, on the eve of war. Faces of my combat friends for these several days grew thin, they appeared tired. Miridanov reported that trains and mobile detachments with the demolition teams of the 77th and 79th battalions are on the approach to Stryy. Section head Bogdanov and assistant of the commandant of squad Ivanov approached.

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Bogdanov reported:

- All trains and the troop trains from the direction of Sambor and Lavochne passed Stryy. Last train with the railroad workers of Sambor squad recently proceeded to the east!

I thanked railroad workers for good work and wished to them good trip.

Near evening Miridanov gave to me the schematic of the Stryy junction and explanatory note to it.

- The plan of the barrier of junction, he said. - It is necessary to decide, how we will carry it out. First of all to verify, if all valuable equipment is loaded and is sent. Find out, if all defective steam locomotives of reserve of NKPS are blown up.

Discussion dealt mainly with a machine-press armament of engine-repair plant. Together with the workers the company of the 84th battalion of Senior Lieutenant A. A. Ustinov dismantled it and prepared it for shipment to the rear.

- Ustinov's company is not managing with loading of armament, reported Miridanov. - He ordered commander Bogatov to assign to it another company to help. About the steam locomotives now I will verify ....

I called the never depressed commander of the 79th battalion M. S. Smirnov.

- Obstacle in the sector to Lavochne - Stryy is in place?

- Incompletely ! Detachment under the command of the deputy

commander of tech. affairs of the battalion of the military engineer of 2 ranks K. K. Abramov there conducts works. Things are not going well. He now operates already at the station Skole. But it is necessary to still explode two tunnels, large bridge across the river Stryy and station objectives.

- Where is located Bobrov's detachment?

- Here, at the station, he blows up the steam locomotives of reserve of the NKPS. Of sixty steam locomotives forty were destroyed. After two hours he will blow up rest.

- As soon as he will be free, send him to the aid of Abramov.

- At midnight in the office of section head I gathered the commanders of the staff/headquarters of brigade and commanders. I described to them about the order of the destruction of the Stryy juunction. According to our plan the junction was divided into two zones: western and eastern. The 77th battalion destroyed West, Eastern - The 79th. After these battalions will finish their work and will leave from Stryy, comes into action the 84th battalion.

Its problem is to place obstacles in the sector of Styyy-Khodorov. I looked in the direction of the commander of the 84th battalion of the military engineer of 2 rank Georgiy Mitrofanovich Litvinovich who was sitting in the corner. Experienced specialist, but is very sluggish, he is scared of bombings. But the thus sitting opposite me commander of the 77th battalion captain Gennadiy Dmitriyevich Bogatov is independent and daring. Operative, railroad operating employee Gennadiy Dmitriyevich, it seems, is born for the maintenance of railroads.

Line from Stryy to the southeast to Stanislav must be destroyed by the 79th battalion of Major I. S. Smirnov. To the execution of this task the battalion could begin only after the setting up of obstacles on the Stryy junction. From Stanislav the route/path of battalion layto Chertkov and Gusyatin. It was necessary to operate separately from brigade, were possible any unexpected contingencies. It was necessary to cover with some forces. From Senior Lieutenant Invanov's report I learned, that at the station the armored train was sttuck. Up to now it covered junction from the air raids of enemy. To send this powerful fire force into the rear as ordinary train, is unwise. I called in the commander of armored train and ordered him to escort the 79th battalion. In the case of contact with the Hitlerites to cover our demolition men by the fire of his guns and machine guns.

All instructions are given. Battalions began the execution of their tasks. In several hours the objectives of the Stryy station will become ruins. To the enemy nothing of valuable will be left. The order of the party and government is such, and the will of Soviet people is such. But sad thought somewhere in the depth of consciousness stirs. We came here thousands of kilometers from the Far East in order to reconstruct this road, these stations. But instead of the creation cursed fascism forced us to be occupied with destruction.

Without hurrying, as if saying goodbye to Stryy, the train of the staff/headquarters of brigade went past the outskirts of station. Long ago when we came here from Zbarazh we were confident, that we will move only to the West. But the unexpected occurred - we go to the east. We calmed ourselves: retreat temporary/time, soon we will chase enemy from our earth/ground and here we will return. We did not think then that for the realization of this dream the years of bloody battles will be required.

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Potutory. The staffs/headquarters of the 31st bridge and 83rd track battalions here are located. They evacuate valuable equipment on the sector Khodorov-Berezovits Ostrov. I call the commander of the

31st battalion captain Pavel Mikhaylovich Malyavkin. Malyavkin reports about the preparation of battalion for the redeployment into Kiev. There on the instruction of the military council of the southwestern Front battalion must defend two bridges across the Dnepr -the Darnitskiy and Petrovskiy.

After glancing at the watches, commander asks:

- everything is prepared, comrade Colonel ! You will permit leaving?

- Do not lose communications with the staff/headquarters of brigade. Find the method to daily report to us about your affairs.

After letting go Malyavkin, I heard the report of the commander of the 83rd battalion of Lieutenant Colonel I. P. Seredin. The ensign of old army, he in the Soviet time finished the technical school of lines of communication, he knows affair to the perfection. But in the decisions he is timid and careful. To be exact he does only what he is ordered to do. Nothing from himself, no initiative. Seredin reported that the two-hundred meter viaduct across the Gluckhaya valley was not destroyed. There remained unharmed in the sector of Khodorov-Potutory also a second stone viaduct of the same length as the first. And indeed for their restoration to enemy it would be

required the minimum of a month! To my anger and vexation there was no limit.

- There is no explosive ! - justified himself Seredin.

Hardly containing myself, I said to the commander:

- Indeed very recently field-engineer regiment destroyed its depot/dump of explosives ! but you each day met with regimental commander and you could not appropriate from explosives !

- I am guilty, I deserve the most severe punishment. t blundered ! - babbled Seredin.

Viaducts thus remained not blown up. Obstacle in the sector of Potutory-Berezovits Ostrov was set weakly.

Telephone began to ring. The commander of the 84th battalion Litvinovich reported. He spoke from Zhidachev station which is in the sector of Stryy-Khodorov.

- Fascist aircraft broke the highway bridge through Dniester. Enormous obstruction was formed. Retreat the rear areas, artillery, tanks.

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Commander of twenty sixth army ordered to me to temporarily end the setting up of obstacles, to urgently restore bridge and to remove the formed conjestion. When passes last Soviet motor vehicle - explode bridge !

- Carry out the order of the army commander.

Trains went one after another in almost continuous wall. We with our train cut into into this wall and went to Berezovits Ostrov. The nearer we approached it, the more slowly went the trains. Before the station the movement of trains completely was stopped. Situation was created very strained. Germans any minute now will swoop down. We are connected to the telephone exchange. I call Berezovits Ostrov, I ask assistant stationmaster about the reasons for the halt.

- Ternopol does not accept trains. There are Germans there: either landing force, or they burst through from the north from the direction of Krasne, he reports. - They say, from Ternopol to us go Fascist tanks.

After hearing this communication/report, I conferred with Bakarev. We decided that it is necessary to send all, that are located in the train, on foot around Berezovits Ostrov to the Trembovl' station. Distance of approximately/exemplarily 30 kilometers. They assigned the military engineer of 2 rank Georgiy Constantinovich Popov the senior of group. To it they posed task - on the arrival at Trembovi' station to immediately organize the maintenance/servicing of sector from Berezoovits Ostrov to Kopychinets. After sending group on their way, I ordered to remove/take motor vehicle from the platform. Together with Bakarev, several commanders and soldiers we went to Berezovits Ostrov.

From the room of assistant stationmaster of Berezovits Ostrov I call on the telephone Ternopol. I hear Serafim Vasilyevich Brykin's voice. He from the first day of war led servicing of the Ternopol' junction. In the subordination of Brykin were the 82nd path and 2nd the mechanized battalions. They serviced the Ternopol' unit and units of the adjacent 4th brigade. Colonel M. G. Stupakov commanded it. Serafim Vasilyevich reported:

- through Ternopol goes an enormous flow of goods from L'vov. Junction this flow does not manage. Therefore Stupakov forbade to accept trains from your sectors. Direct them to the detour to Gusyatin and Chortkov. In the outskirts of city already occurs

combat:.

I understood the complexity of the work of the Ternopol' junction. In three pre-war months our brigade did not have time to construct detours around it.

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Therefore for the Ternopol' railroad workers it was necessary in all trains, which enter from Berezovits Ostrov, to change "head to tail", i.e., to transpose locomotives. With this overflow of trains right under the wings of hostile aircraft is not easy work. In spite of this, I entreated Brykin to accept from our station several trains. Trains left in the direction of Ternopol', but in an hour-two they sent them back.

In 1941 Berezovits Ostrov was small station - 4-5 short tracks, with the low-power water-supply point. But there are many steam locomotives under the servicing with water. How to give all of them a drink? I decided that independent of the presence of water in the trailer tank it is necessary to keep steam locomotives under the water-collecting column not more than 15 minutes.

It was possible to push only part of the trains in the direction

of Kopychintsev, when from the adjacent station of Proshov they reported:

- on the line worked saboteurs, small accident.

At this time in Berezovits Ostrov arrived the train of the 77th battalion. Together with the train the division head of the exploitation of brigade captain Peter Fedorovich Belorukov arrived. I immediately sent Belorukov and commander Bogatov to the place of the accident. With the aid of our people local railroad workers rapidly eliminated the consequences of accident.

Train flow from Berezovits Ostrov is moved to southeast. At night arrived to the station also our headquarters train. With Bakarev I sat down into our car. I nestled down by the window and instantly fell asleep. I awoke from a terrible crash/grating. Car lit up by the flashes/bursts of lightning. Strong rain furiously whipped the roof. Outside the windows as if some giant tore sky - black as tar the dark of night. Train stopped. Alarmingly Steam locomotives made discordant sounds. I looked into the corridor. In the dull light of kerosene lamp I saw person on duty on the train. Opposite him sat the editor of the brigade large-circulation newspaper "Stalin mission" A. A. Kukarin. They quietly conversed, as if nothing had happened. I asked:

- Why do we stand?

Kukarin melancholy answered:

- Is it is possible in this bedlam to learn anything:.

- Take telephone set, post, get connected to the wire/cable and learn ! - I ordered to person on duty and he moved out following him into the vestibule.

End section.

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The person on duty gave hand receiver to me. In the tube I heard familiar thunderous bass of the commander/chief of the rear of battalion captain S. S. Miller. He scolded with the machinist of the steam locomotive:

- Disengage your steam locomotive from the train and push the train going in front. If you do not do it - you will not go forward. You will fire here up to the arrival of Germans ....

I entered into the conversation, introduced myself and I advised to engineer to fulfill the instruction of Miller. In the conversation the military engineer of 2 rank G. K. Popov entered. To my questions, where do we stand and what kind of cry the steam locomotives raised, it answered:

- You stand on the approach to Trembovl' station. Behind the station the steep climb begins. We detach steam locomotive from the train going behind and we place it as the pusher to the tail of the

front one. We thus pump over the trains across the pass. Velocity is small, and the noise is large.

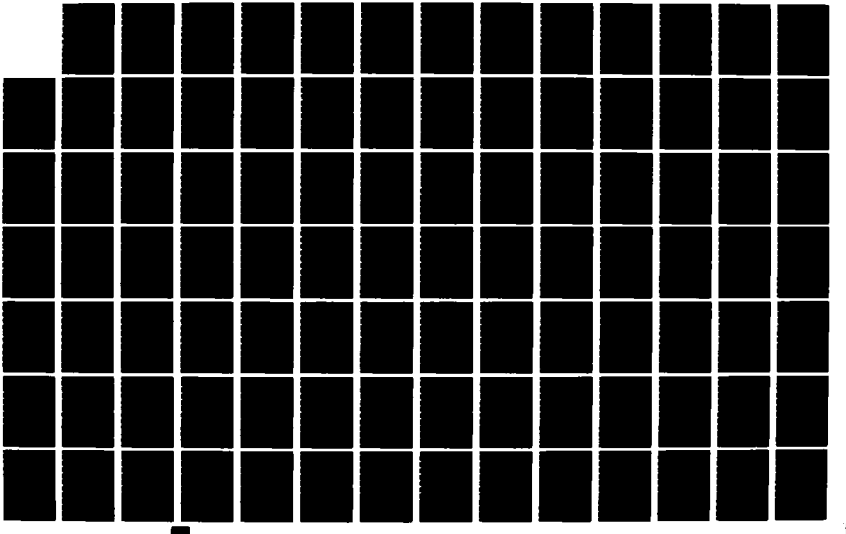
At Trembovl' station the telegraph message from the commander/chief of the military communications/reports of the southwestern Front Colonel Korshunov awaited me. It was ordered for the brigade to provide technical cover of main line from Darnitsa to Vorozhba through Nezhin, Bakhmach and Konotop. Me and Bakarev the Colonel Korshunov urgently called to Kiev. We on the map here divided up the direction indicated into sectors and attached them to the battalions. Through the messengers and on the telephone we reported the obtained order to commanders.

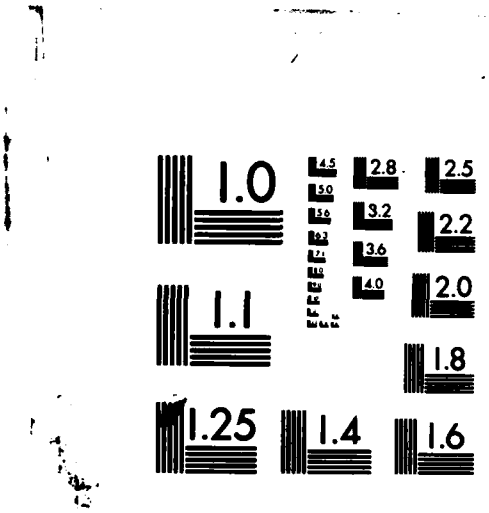
But as to reach Kiev faster? Most rapid and most reliable form of transport under the established conditions - automobile. Especially since there is one on the platform. But to leave by myself, and to leave battalions to the whims of fate? No, that won't do. They decided to follow in the headquarters train together with the units to Proskurov (now Khmel'nitskiy), and there already to transfer to the motor vehicle.

That's what we did. And very well we did. In Kopychinatsakh met two train flows, sent by us from Stryy. One flow went through Stanislav and other - from Berezovits Ostrovo. Both these flows

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

should have been passed along the one-track line to Kopychintsa - Gusyatin and Yarmolintsa. Line is weak, capacity is low. We released the trains in "packages" - one after another, with small intervals. In the completion of everything the congestion of train again occurred! Engineers did not know road profile, conducted trains on unknown traction arms.

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On each kilometer danger was waiting for them. And pusher thus pushed cars in one of the trains, they blocked passage. The movement of trains stopped.

For the elimination of congestion, I raised entire staff/headquarters of brigade. But our forces alone were insufficient. Fortunately, the train of the mechanized battalion of the 1st brigade of the special corps hereabout proved to be. Together with the engineers of staff/headquarters the soldiers and the commanders of this battalion we rapidly layed alternate route and opened the movement of trains.

By now the train of the staff/headquarters of brigade broke through to Yarmolintsa, the 79th battalion under the cover of armored train placed obstacle in the sector from Stryy through Stanislav to

Yarmolitsa. In front went train with the soldiers and the commanders, and also the equipment of battalion. Behind the train at a distance of one-two stages the armored train moved. Following it went a mobile detachment with the platforms loaded with explosive and also a motorized hand car with the trailer, where mineblasting group was accommodated. The demolition men were kind of the rear guard of brigade. The detachment of "destroyers" headed Senior Lieutenant M. Ya. Bobrov and I. P. Varlam. They manned it with volunteers from the headquarters commanders, who expected real combat.

At first detachment exploded the bridge across the Stryy river. Bridge is large, five-span. It was difficult for our people to annihilate it, Soviet, national. But they fulfilled the order of the native land: "nothing to leave to enemy"!

There is a definite interest in the order of the organization of obstacles. Next target - station, bridge, tunnel - armored train passed at the low speed and stopped within sight. The group of armored train attentively observed vicinity. Then at the station appeared the mobile detachment, which, as a rule, stopped between the station and the exit switches, and when they exploded tunnel or bridge, then - at certain distance beyond them. The platoon commander put out combat security unit, and after explosion removed it. For setting fire to constructions was a special group. It was headed by

Chief Gordeyev. The same group established the "order" on the depots/dumps and the stations. Valuable equipment was given to population, rest was annihilated. Stations, as the important communication centers, set on fire, and large/coarse stations also blown up.

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Points and crossings and the constructions of water supply were destroyed by group of the commander/chief of our armorer workshop senior lieutenant of tech. services P. M. Litvinov. Courageous children were selected in Bobrov's detachment. They worked under the motto: "One for all and all for one" ! To the most difficult operations/processes first went senior lieutenant of tech. services P. M. Litvinov, Senior Lieutenant V. R. Vask, Chief Petty Officer Gordeyev, soldier Gorbachenko .... They composed the nucleus of group, they were the excellent assistants to Bobrov.

At the station Dolina, which is 30 kilometers to the southeast of Stryy, Chief Gordeev revealed/detected on the station routes/paths 18 cars with the aerial bombs. About the finding he immediately reported to Bobrov. He called up Litvinov and Vask:

- The unexpected finding - aircraft bombs ! As good as

explosives ! We're running short, and in front still so much work.

All astonished looked at Bobrov. Perhaps is it possible to blow up objectives with aerial bombs? Someone of the Red Army men did ask:

- We ourselves with these bombs will we not be blown to bits?

- I think that we will not get blown up, answered Bobrov. - for the beginning let's test. Let's go let us look, what kind of "toys" these are.

We opened one of the cars. Bombs (100 kilograms each) lay in latticed packing. Bobrov considered aloud:

- if bombs are conveyed by railroad, that means, they are not terrible.

To inspect bombs was called Chief Gordeev. In ten minutes he reported:

- In the casing of bombs trotyl. The very thing which to us is necessary !

Now we all did think about the question, how to explode bombs?

P. A. Frolov proposed to the body of bomb to fasten the trotyl cartridge with the Bickford fuse and to explode the trotyl by ordinary method. From the detonation the bomb will explode and will do its work. They decided to conduct the first experiment on the water tower. Strong burst shook vicinities, water tower flew into air. Test succeeded. Cars with the bombs were connected to the mobile detachment. Explosives became more than sufficient !

With each new annihilated objective increasingly more experienced became our demolition men. True, frequently this experience was obtained with the risk for life. Thus, in the area of Bygach station group nearly perished. Demolition men prepared tunnel on blind rainy night for the burst.

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Large bridge close to the tunnel adjoined. Bobrov knew that it is necessary to hurry, Germans already approach the adjacent station. He ordered to drive into the tunnel three four-axle cars with the bombs and to wedge the wheels of cars with shoes and ties. When everything was prepared for the burst, they set fire to blasting fuzes. Trolley dashed across the bridge to the stage. At 1.5-2 kilometers behind the bridge there was a steep curve. On it the trolley stopped. This saved detachment. I several seconds the tunnel operated like the mouth of

giant gun. From it together with bomb splinters, stones, fragments of ties an igneous cloud escaped. It as whirlwind was carried past the trolley, sweeping everything on its route/path. Thus, happy chance did save miners life and did present object lesson on the theme: "What is the target-directed course of shock wave"?

In Stanislav area the group of armored train distinguished itself. It shot down German "Junkers" which bombed the station.

In the morning on 6 July the trains of the 79th battalion passed Kopychints and they were already on the approach to Gusyatin. Suddenly head train stopped. Route/path is in front destroyed. Toward the restoration of route/path Major Smirnov directed the 4th company of Senior Lieutenant F. P. Kul'pin. Hardly company approached the place of damage, when in railroad passage the noise of German motorcycles was heard. Fascists first opened fire/light. However, our soldiers were not lost, they deployed and accepted combat. We armed well all our battalions with small arms, taken at the depots/dumps during the retreat. Firing company conducted from the rifles and the machine guns. Hitler swell fellows did not withstand it and drove away behind a hill. They lost many killed and wounded.

Commander directed in the direction of Gusyatina reconnaissance/intelligence. Soon scouts returned and reported, that

the Germans occupied Gusyatina. Then Smirnov decided to drive out fascists from the station. Enemy met our lines with mortar fire/light. Soldiers, being concealed behind the natural terrain and the bushes, crept up to the fascists and threw grenades. The Red Army man Vaniylin annihilated with grenades six motorcyclists, Nikitenko - a machine-gun crew and two submachine gunners. Platoon commander Lieutenant Nikolai Shevchenko skillfully stunned Germans. He did not let fascists raise heads. But thus a bullet of enemy hit the left arm of Lieutenant.

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Overcoming pain, he rose in his entire enormous size, threw into the Hitlerites last grenade and, being doused by the blood, he fell. Courageously fought company commanders Senior Lieutenants T. I. Sen'kin and F. P. Kul'pin. Several times carried along soldiers into hand-to-hand fighting with the fascists battalion commissar A. I. Tolmachev, chief of staff Major A. I. Tolimanchuk, and assistant chief of staff captain Ye. I. Drozdovskiy. The assistant to commander for supply captain A. A. Gusel'nikov, in the past the first-class machine gunner, again took into his hands machine gun. The machine gun of Gusel'nikov literally mowed down the pressing Hitlerites.

Several hours combat continued. Soldier-railroad workers were

not able to knock out enemy from the station. To the help of fascists approached the tanks and the new detachments of motorcyclists. Enemy began to envelop battalion from the flanks and infiltrated into the rear. Major M. I. Smirnov gave the order to withdraw from action. But not to all it was possible to be detached away from the enemy. Germans surrounded the political instructor of the company Stovbunskiy. When he shot all cartridges, Hitlerites proposed to him to surrender. But on Stovbunskiy there was stored for an emergency a grenade. He allowed enemies to approach and, when they wanted to capture him alive he shouted: "communists do not surrender" ! - and he threw himself on his grenade. Next to the pol. instructor fell. The fascists surrounding him.

In combat the chief of staff of Tolimanchuk and the battalion commissar Tolmachev perished. The last time soldiers saw him on the steam locomotive of head train. Tolmachev fired back at the Germans surrounding him.

Were cutoff from their comrades A. A. Gusel'nikov, F. P. Kul'pin, Ye. I. Drozdovskiy. Several times they attempted to pass front line, but without result. Then commanders began to penetrate into the forest of Belorussia and joined up with the partisans. Together with them they heroicly fought until the arrival of the Red Army.

In the reader can arise the question: why the artillery of armored train did not support battalion? The fact is that the armored train stood behind the trains far from the field of combat. Gun fire from the large distances did not bring proper effect. When it became clear that the track to the east was cut, the group of armored train exploded it.

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To the east the battalion broke through on the right bank of Zbruch river. At dawn on 7 July it waded across river 20 kilometers to the south of Gusyatin and was connected with its units. Soldiers carried out 70 wounded comrades on shoulders. In combat the battalion lost 30 percent of personnel.

During this day the trains of the staff/headquarters of brigade, 77, 83 and 84th the battalions arrived at Proskurov. At the station to us in the car came the commander of the 27th brigade Colonel B. I. Pavlov. He reported that the sector of Yarmolintsy - Proskurov - Zhmerinka was attached to his brigade. Thus, we obtained the possibility to follow to our new main line of Darnitsa - Vorozhba. No Act of reception and delivery of lines to draw up was necessary. We

already had destroyed a good half of road and was now located in the hands of fascists.

Already in the corridor I heard the familiar voice of Serafim Vasilyevich Brykin. He arrived from Ternopol'. I agreed with him on the telephone to meet in Proskurov and to hence go together into Kiev. I had not met with Serafim Vasil'yevich for a long time. It at least seemed so to me. We parted already in Zbarazh a fortnight ago. But how much events in these days occurred !

Serafim Vasilyevich placed his field suitcase trunk on the floor and we firmly, in a manly manner, embraced ....

In the hour the motor vehicle took us away in the direction of Kiev. Route/path lay/rested through Vinnitsa, Kazatin, and Fastov. On the shoulders of roads, on field paths moved to the east the innumerable files of people. Fascist aircraft appeared at times in the incandescent sky. In the dusty ditches, on the emerald grass of meadows after each approach of Hitler carrion vultures lay those killed and wounded.

All these people approached Kiev. It was not difficult to imagine however, what was created on the Kiev railroad junction. Tens of thousands of people besieged passenger and commodity stations.

Enormous terminal area was giant camp with the bonfires and the home-made tents.

We interested themselves in further fate of these people. Evacuate them hence into the rear or not? They went in the evening to the receiving and dispatching tracks. The filled trains departed from the passenger and sorting stations continuously.

The railroad workers for the Kiev unit and administration of the southwestern road had no rest. The evacuation of population and valuable equipment was declared an affair of state importance.

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In Kiev and in all right-bank Ukrainian cities the armament of plants, factories, institutes, medical installations was demounted and sent to the east. For this thousands of empty cars were required. It is necessary to free them, to prepare, to send to the points of loading, and then to take back to the station tracks, to form into the trains and to send to the east. Lot's of work ! The flow of trains simultaneously went to the front with the manpower, the armament, the ammunition. Cars were not sufficient.

In Kiev we, first of all, went to report to our immediate

superior, commander of the special corps, N. A. Prosvirov. With the operations group of staff/headquarters he was located in Darnitsa. I reported to Prosvirov about the activities of brigade in the assigned sector, that we had loaded, sent to the rear 64 trains with the equipment and 92 steam locomotives. I described about the obstacles set by battalions.

During the same day Nikon Andreevich left with the staff/headquarters into Mirgorod. Between us was established/installed regular communications/connection.

From Darnitsa we returned into Kiev. We reported about the affairs of brigade and our plans on the technical cover of new sectors to the commander/chief of VOSO [Military Communications Service] of the south Western Front Colonel A. A. Korshunov.

From the administration of VOSO we went to the commander/chief of the southwestern road P. M. Nekrasov. With Peter Mikhaylovich I am acquainted already during service in Belorussia. He then was the commander/chief of Belorussian road, and I commanded the 3rd railroad regiment. Serious, steadfast, specialist knowing his affair to perfection - similar Nekrasov forever remained in my memory. On his shoulders during those days enormous responsibility rested. He was obligated to organize the delivery/procurement of everything

necessary for the front and to provide the evacuation of population and equipment. On the instruction of NKPS [People's Commisariat of Railroads] he was simultaneously occupied with the formation of two bridge construction detachments. One of them, the bridge detachment No 2, whose commander/chief was assigned Isaak Yulisovich Barenboym, almost entire war was located at my disposal.

In spite of being terribly busy, Peter Mikhaylovich accepted us and gave us sufficient time. With him we agreed about the deployment of the staff/headquarters of brigade in Darnitsa and about the operational procedure on the direction allotted for brigade from Darnitsa to Vorozhba.

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At the end of the conversation Nekrasov with bitterness said:

- It is hard for us in last days. Germans bomb continously, and here another storm of misfortunes has come up.

And he described about the "self-explosion" of the bridge across Dnepr near the Nedanchich station, in the sector Chernigov - Ovruch. Miners in advance prepared this bridge for the destruction, but they did not fulfill all requirements of manual on blasting. Electric

detonators were placed in the charges, but they did not hang them near them. Several days ago came unexpectedly thunderstorm, and lightning hit the electric firing circuit. Occurred the explosion, as a result of which the span building/structure of bridge collapsed into the river.

The restoration of bridge they charged to the 7th forward repair train, two battalions of the 19th brigade and construction organization No 1, which in peacetime laid tunnel near Dnepr. The group of specialists under the guidance of the chief engineer of 7th forward repair train K. A. Gubar developed the project of the restoration/reduction of structure/installation. They proposed not to raise the fallen span structure, but to use it as the base for the wooden frames. That's what they did. To these frames metallic span buildings/structures from the H-beams were installed. For reinforcing the fallen trusses on their lower contour with excavating assembly they deposited soil. The aircraft of enemy bombed builders. Died remarkable carpenter P. A. Chekhovich, several men were wounded.

In alarmed mood we left the office of commander/chief of road. Kiev was evacuated. Inhabitants loaded their household goods on carts, motor vehicles, bicycles, motorcycles. The endless flow of people was drawn to the bridges across Dnepr.

But the units of our brigade approached already Kiev. True, the 77th battalion on the way to its new sector obtained order to place obstacle on the line Proskurov - Grechany - Zhmerinka. This problem was fulfilled by several battalion specialized mobile detachments simultaneously. On the latter of them was located the commander captain Gennadi Dmitriyevich Bogatov. After placing obstacles in Grechanakh, mobile detachment moved out to the stage in the direction of Proskurov. On this stage for the destruction of superstructure of the route/path Bogatov decided to use track-wrecking machine "worm". The steam locomotive, which they released following the mobile detachment, drew this simple devise.

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Gennadi Dmitriyevich continually jumped out from the trolley, he approached the steam locomotive and followed, how works "worm". Rails were twined by snakes, they cracked, they broke. On this route you cannot drive, but even to walk is difficult.

- Let be glad the fascists with our kindness ! - with bitterness said commander to Red Army men.

Misfortune arrived unexpectedly. On the passage German tanks bursting through to us in the rear met the mobile detachments. All

around flat as table, steppe. To be concealed nowhere. For a few minutes the fascists from guns and machine guns shot our children. Remained to rest forever on the Ukrainian steppe the remarkable battalion commander captain Gennadi Dmitriyevich Bogatov.

About this tragedy during the same day to us reported the dep. comm. to pol. unit of the 77th battalion senior political instructor A. A. Galafeyev. In the answering telegraph message I ordered him to take temporarily command element of battalion. We very heavily survived the death of Bogatov, simply we could not imagine this merry, cheerful person dead. After learning about death of commander, S. V. Brykin said:

- We fight together, but we are condemned to die separately ....

11 July 1941 trains of the 77th and 79th battalions arrived at Fastov station. At this time on routes of approach to Fastov furious fighting took place. German tanks broke into Fastov. Together with the field units to the defense of city arose the 77th and 79th battalions, and also the units of the 4th and 27th railroad brigades. Combat continued 11 days, from 11 to 22 July.

Enemy continously bombed and fired on city and railroad junction from the guns. The soldiers of the railroad troops/forces provided

the continuous motion of trains and prepared defensive lines. On 18 July enemy made the attempt to burst open to Fastov from the direction of Brusilov. Route/path barred the 12th battalion of mechanization to Germans. Captain A. G. Fedotenkov commanded it. The battalion group of demolition men exploded the bridge across the Unava river. Tanks of enemy did not pass. Did not burst open the Germans through Brusilov even on 20 July. Soldier-railroad workers together with the infantrymen and the artillerymen threw back the enemy. On 21 July was repelled one additional attempt of the Hitlerites to force Unava river in the same area.

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After being convinced that from Brusilov to the city could not be penetrated, fascists concentrated tanks, infantry and artillery in the area of Belaya Iserkva. On 21 July to Fastov burst through 32 German tanks. Soldier-railroad workers entered with them combat. The group of the soldiers of the 79th battalion shot out with the antitank gun, two hostile vehicles. Several tanks were rendered inoperable with grenades and molotov cocktails.

But forces were clearly not equal. Hitlerites surrounded railroad workers. An attack of enemy followed attack. The battalions turned them back. Simultaneously they placed obstacle at Fastov

station. In the hot spots of combat appeared the commissar A. A. Galafeyev. With the rifle in the hands he fought with the Hitlerites. He carried forward soldiers into the counterattacks by personal example, he inspired those fighting with impassioned Bolshevik word. With each hour hostile ring increasingly more tightly was drawn. The position/situation of those defending became critical. Unit commanders decided to escape from the encirclement. Two groups of volunteers covered breakout. They were headed by military commissar A. A. Galafeyev and Senior Lieutenant L. A. Krivtsov from the 79th battalion. The attack of Hitlerites also fell on these covering forces. The group of Krivotsov was attacked by hostile tanks. In unequal combat all soldiers and commander himself perished. Commissar A. A. Galafeyev with the soldiers consolidated their position in the building of the Fastov station. Several days continued the furious fighting of the handful of courageous ones with the Fascist thugs. But ammunition was running low. To repulse an assault now was nothing. On 22 July Germans pulled to the station the tanks, which began to shoot building from the guns. At this time to the aid to the beseiged heroes burst through our armored train. By the fire of its guns it drove off the tanks of enemy from the station. The commissar Galafeyev ordered to his detachment to burst open to the armored train. With the singing of "international" the Red Army men rushed to the enemy. But hostile lines encircled station with dense ring, and their courageous patriots were not able to break through. Those

remaining alive together with the commissar Galafeyev were barricaded in the building of station and vowed: "to fight to the last cartridge and the last breath" !

Hitlerites attacked soldier-railroad workers with a squall of mortar and artillery fire. Bursts shook railway station walls, fire encompassed quarters/premises, smoke suffocated heroes. The covered with wounds, bleeding, choking railroad workers continued to fight.

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And when at the doors the barking commands of Hitler officer were given, at the fascists flew last grenades ....

In Kiev and at the station Sorochniy Brod, which is eight kilometers from Fastov, the duty signalmen heard in hand receivers automatic bursts, shell bursts and grenades. In the roar of combat was given the bass voice of the commissar Galafeyev: "fascists conduct strong fire from the guns and the machine guns. Ammunition is low, but station is in our hands. We keep ... ". With these words everything in the tube fell silent.

During the same day P. M. Nekrasov rang to me and he described that Galafeyev to the last moment maintained

communications/connection on the selector with him. Before his death he said: "communications/connection I break. Germans broke into the turret ... ".

Thus perished courageous commissar Aleksandr Galafeyev and his soldiers. They did not surrender to enemy.

If, reader, you will pass through Fastov, then you will see on the building of station memorial plaque. On it in gold letters in the Ukrainian language it is told about the immortal feat of soldier-railroad workers of the 77th and 79th battalions. A. A. Galafeyev's name is given to one of the streets of Fastov city and the pioneer detachment of the Fastov boarding school.

Situation on the railroads of the Ukraine in summer and in the fall of 1941 became very strained. Under the conditions of supremacy of hostile aviation intense two-way transportation continued. To the front the troops/forces and everything necessary for combat were supplied. To the rear the population and valuable equipment was evacuated. Before the railroad workers the task stood by any means to maintain the survivability of lines, stations and junctions.

The preservation of the survivability of railroad constructions in tact became not only primary task, but in organizational and

technological sense the independent form of the combat activity of the railroad troops/forces. This form of combat activity was born in the war and no rules and no manuals thus far for it was provided. In peacetime we considered that the restoration of objectives destroyed by the aviation of the enemy in no way differs from the ordinary, standard methods and procedures.

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So it was during the years of the first world and civil wars, when aviation did not deliver massed attacks on the railroad objectives. The discarded single bombs did not cause particular harm. But even if there was destruction, then they rapidly were restored. Therefore earlier, there was no need to separate the elimination of the consequences of the strikes/shocks of hostile aviation into the independent form of combat activity and the preparation of the particular specific methods of its organization.

Another matter now, when the effectiveness of air strikes sharply increased. Fascist carrion vultures simultaneously destroy entire complexes of structures: rails, artificial communications installations, water supply, rolling stock. Vital control centers of the movement of trains are destroyed thereby. And all these centers the enemy renders inoperable in a well thought out manner, by a

definite system. Against this system of destruction we had to set our system of rapid restoration with our special devices and methods of organizing the labor/work. Creation of this system - task complicated, responsible. For its execution was required large courage of executors/performers. Indeed they had to rescue people, equipment and restore that destroyed under the fire of enemy. Yes even rescue, for example, of burning tanks with gasoline or armed cars is dangerous business. Almost from the first days of war with the total efforts of all railroad troops/forces were laid the bases of the system of this new form of combat activity. It included a whole complex of interrelated measures. Here entered the methods of preparation for the restoration the rescue of people and equipment, the very process of works and methods of the provision of continuity of the movement of trains under the effect of aviation enemy. The new form of the combat activity of our troops/forces began to be called the technical cover of railroads.

In the first days of July our brigade almost completely occupied its new direction for the technical cover. The 83rd battalion provided protection and train work of the head sector of Darmitsa - Nezhin and the line Bakhmach - Konotop - Khutor Mikhaylovskiy. The 84th battalion arose in the sectors from Nezhin to Bakhmach and Shchors. The 79th - Bakhach Gomel - Romny - Romodan (isk.), and the 77th - Kontop - Vorozhba, Vorozhba - Khutor Mikhaylovskiy. The 2nd

mechanized battalion provided the vital activity of station Bakhmach Kiev.

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The eightieth and 82nd battalions at this time were transferred to the operational control of the 1st and 13th railroad brigades.

In the neighborhood with us the 1st and 4th brigades performed. the 1st - occupied the sectors: Darnitsa - Grebenka (isk. (actions)) - Romodan and Grebenka - Priluki. The 4th - Romodan - Poltava, Poltava - Kremenchug - Romodan (action.), Grebenka - Zolotonosha - Cherkassy - im. T. Shevchenko - Mironovka and the branch of Zolotonoma - Lyaplava. The same brigade protected Dneprovsk bridges in Kaneva, Cherkass and Kremenchug.

Besides the enumerated large units/formations in combat for Kiev participated the 19, 25 and 27th railroad brigades, and also units of the 11th front railroad motor pool and control of the special corps.

Soldiers - railroad workers not only conducted restoration and barrage works, but, when situation required, with the rifle in the hands the attacks of enemy repulsed, exhibiting mass heroism.

In his recollections the commander/chief of the operations branch of the staff/headquarters of the southwestern Front, now Marshal of the Soviet Union I. Kh. Bagramyan gives several episodes of courage and valor of military railroad workers. Thus one of them: "enemy, without considering the losses, did not want to forego the hope to burst into Kiev and to the crossings on Dnepr. In the morning on 10 August fascists renewed attacks along the highway Vasil'kov - Kiev, after concentrating here not less than five divisions.

The situation for the troops/forces of the 37th army during this day became so difficult that it was necessary to send to it in aid individual subunits of the 4th division of the NKVD and the unit from the railroad troops/forces of front. The 75, 76 and 77th construction-rail and the 31st bridge railroad battalions met enemy in the southwestern outskirts of Kiev.

The commander of the 76th battalion captain V. K. Kup and commissar V. M. Il'in brought their people - civil engineers, metal workers, carpenters, diggers - into the attack in the area of Myshelovka. Chest to chest they met with the fascists, they lost many comrades, but they pushed aside enemy. But the small group of dare-devils headed by S. P. Morozov penetrated in the enemy rear, took mortar battery and opened fire on the Hitlerites from the German mortars, even having more increased commotion in their ranks.

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Courageously fought the subunits of the railroad builders of captain Slepkov, Senior Lieutenants Komirenko, Yurin, Rosay, and other glorious commanders" [1].

FOOTNOTE [1]. I. Kh. Bagramyan. War thus began. M., Voenizdat, 1971, page 285. ENDFOOTNOTE.

In order to paralyze movement along the railroads of the Ukraine, Germans tried first of all to destroy the bridges across Dnepr. Fascist carrion vultures deposited one after another bomb strikes on the railroad bridges in Kiev, Dnepropetrovsk, Cherkass, Kanev, Zaporozh'ye, Kremenchug ... before us stood the task immediately of eliminating the consequences of bombing, not for a minute stopping the movement of trains. But this is not all. To the right bank the retreating military units with the tanks, the artillery, the convoys approached. Tens of thousands of motor vehicles, droves of cattle, supplies were saved. People crossed to the left shore on the ferries, the boats, the rafts. But what is to be done with the equipment and the cattle? The military council of front ordered to use railroad bridges for their crossing. But on

these bridges there were not always motor-and-animal passages. It was necessary for us to make a special flooring. In the interruption between the trains on this flooring the people, equipment, and droves of cattle went to other shore.

Entire August the Hitlerites many times attempted to master Kiev and to force Dnepr in the zone of the southwestern Front, but it was unsuccessful. This period was one of the most strained in the combat of life of railroad troops/forces of the southwestern Front. Under the continuous bombing it was necessary to simultaneously carry out several things. To restore the destroyed constructions, to provide the movement of trains, with the weaponry in the hands to repulse an assault of enemy, to rescue the burning cargoes and rolling stock. All units passed these tests and withstood them with honor.

After combat for Gusyatina and Fastov the 79th battalion was set to the technical cover of sector from Bakhmach to Romodan. The staff/headquarters of battalion was placed in Romnakh. Only companies had time to become acquainted with the sector, since from the direction of Bakhmakh on enormous flow of trains moved. Trains continuously were bombed by German aircraft. Under the strikes of hostile aviation were located all transit stations of this line. The Bakhmach junction underwent especially cruel bombing.

It operated in six directions: Kiev, Bryansk, Kharkov, Gomel, Kremenchug and Poltava. Breakdown of the Bakhmach junction would destroy the supply of the troops/forces of the southwestern Front, would stop the evacuation of the armament of plants and factories, and also military economy equipment from Kiev and Gomel. We made all efforts/forces in order to maintain the survivability of entire sector and all stations of junction. The movement of trains was not interrupted/broken, frequently the trains went even during the bombing. In such cases to the aid to local railroad workers came our soldiers and commanders.

I was witness of one of the most bitter raids of fascist carrion vultures. During that day at Bakhmach Kiev station were amassed many trains. Next to the trains, loaded with explosives, the march routes with the fuel and hospital trains proved to be. A group of hostile aircraft swooped down. Several bombs fell into the tanks with the gasoline and into the armed train. Station was in an instant flooded with a sea of fire. Shells and tank cars blew up. Cars with the national-economic cargoes blazed. Only the one 2nd battalion of the mechanization of our brigade covered station. Soldiers and commanders rushed to carry from the hospital train the casualties. Then they began to remove the trains, to put out fire. Battalion small on

strength together with the railroad workers did great work. Were removed from the fire more than 100 loaded cars and tanks with the fuel. Skillfully untwisted the incandescent tie rods of cars private first class Rustamov and Junior Sergeants Oguz and Raroch. After seven hours they restored the movement of trains along main track, and in the morning of the following day they cleared the territory of station of the broken and burned down rolling stock. Entire personnel of battalion was worthy of highest praise.

After this raid the operating personnel of road and workers of the VOSO of our front drew for themselves the conclusion: under no circumstances not to allow at the stations the accumulation of trains and not to place side by side trains with the fuel and the ammunition. In the case of the threat of an air attack to advance trains with the inflammable cargoes on the stages.

In not less difficult conditions worked other battalions of our brigade. To describe about the combat affairs of all units simply there is no possibility.

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On 8 August the 2nd tank group and the 2nd army of enemy passed into the offensive in the directions of Mogilev, Gomel and Roslavl',

Starodyb with the task of moving out into the flank of the troops/forces of the southwestern Front. Exhausted with continuous combat, the troops/forces of central Front, which defended this sector, began to withdraw. Did not yield positive results also the counterattacks of the armies of Bryansk Front. On 7 September the large forces of Germans burst through to Konotop, Bakhmach, and Glukhov, after proving to be considerably east of Dnepr. Simultaneously on the southwestern Front units of the 17th German army in Kremenchug area forced Dnepr and by 9 September took large beachhead on its left bank. On 10 September enemy occupied Konotop and Romny. Soon the northern and southern grouping of Germans closed the ring of encirclement around 5, 37, and 26th armies and parts of the forces of the 21st and 38th armies of the southwestern Front.

At this time in Romny was located the staff/headquarters, commandant, machinegun platoons and two platoons of the 4th company of the 79th battalion. The remaining subunits of battalion worked on the line. The 1st and 2nd companies covered the sector of Rubanka - Bakhmach the 3rd and two platoons of the 4th company restored tracks at the transit station of Yuskovtsy of the sector Romny - Lokhvitsa. Commander of battalion Major M. S. Smirnov and commissar Nazmutin Nurutinovich Amirov here were located.

German tanks with the landing force of submachine gunners broke

into Romny suddenly. Our soldiers and commanders were not lost and met enemy with small arms fire. On the streets of city brief, but persistent battle took place. In this combat Lieutenant A. A. Orlov from the ambush knocked out two German tanks with grenades with the destructors tied up to them. The first attack of enemy was repulsed. But forces were far from equal, and commander ordered to subunits to withdraw across Sula river. However, the 1st and 2nd companies did not have time to retreat and remained in the rear with the Germans. Company commanders used the fact that the enemy did not have time to still create continuous front line, during the nights, being concealed in the natural terrain, they began to lead out subunits from the encirclement. Encounters with the enemy could not be avoided. In combat with the fascists perished the commander of the 2nd company Senior Lieutenant N. M. Urusov, platoon commander Lieutenant S. F. Kosolapov and many Red Army men.

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While the 1st and 2nd companies broke out of the encirclement, other subunits of the 79th battalion fulfilled the combat assignment in the sector of Romny - Yuskovtsy. Lieutenant S. I. Chernishev's platoon obtained order to defend the railroad bridge across the Sula near Romny and to prepare it for destruction. Platoon repelled several bitter attacks of enemy. Then fascists forced river in the

area of highway bridge and attacked the platoon flank. It was necessary to urgently destroy bridge. Explosives Chernishev did not have, and he still in good time ordered to cover the bridge with logs and brushwood. When Germans approached the bridge, our soldiers set fire to the doused with gasoline logs and brushwood. Enormous bonfires flared up. Under the effect of the high temperature the metal was deformed, and bridge malfunctioned.

During the withdrawal our subunits by hand and mechanically destroyed equipment of STsB and communications/connections, points and crossings, burned wooden buildings/structures. From Yuskovts station they evacuated artillery depot/dump.

During these difficult days perished one of the best demolition men of brigade - senior lieutenant of tech. services Peter Mikhaylovich Litvinov. He was sent by commander on reconnaissance. In the trolley together with him left Captain Sayenko representative of special department. On the route/path they clashed with the German tanks. With a direct hit of shell chauffeur of trolley and Litvinov were killed. Sayenko remained alive and at night returned to his unit.

Until 27 September the surrounded troops/forces of the southwestern Front conducted furious fighting with the Hitlerites.

Together with them fought railroad units of 25, 19, 17, 13, 5 and 27th brigades.

The 31st bridge battalion of our brigade (commander Major P. M. Malyavkin) was temporarily assigned to the 25th railroad brigade of brigade commander L. N. Chernozatonskiy. Battalion stood on the technical cover of Petrovskiy and Darnitskiy of the railroad bridges across Dnepr. Several days combat for these bridges continued. Our soldiers retained bridges and exploded them only after the withdrawal of the Soviet troops/forces from the city. Blew up bridges the commander P. M. Malyavkin himself. It must be said that fascists did not succeed in using not one railroad bridge across Dnepr.

After the explosion of bridges the battalion together with the field units fought in the encirclement. Many soldiers and commanders did not succeed in escaping from the igneous ring. Together with the group of railroad workers fell in the encirclement also and the commander/chief of the southwestern road P. M. Nekrasov. Until now, nothing is known about the fate of this remarkable man.

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I do not doubt, that he perished as real Soviet patriot. About combat in the encirclement engineer of battalion V. Kardash who had got out of the fiery circle described it to me.

The 31st battalion together with bridge train 1-bis and five armored trains moved out on not yet occupied by enemy line Darnitsa - Grebenka. Armored trains in front went. Major Penkov commanded them. On the armored trains shells barely remained. One gun, established/installed on armored platform, only functioned. The 31st battalion had several machine guns, rifles and 4 cars of ammunition for small arms. Bridge train led engineers Rosenkrantz and Rudnitskiy.

In Borispol' P. M. Malyavkin isolated the group of technical reconnaissance. Military engineer 2nd rank I. V. Timoshenko headed it. Group went in front of the armored trains and followed the condition of tracks. Where the tracks were damaged, they were immediately repaired. In the train of this group there was V. Kardash. Germans continually bombed column. On one of the stages

descended from the rails the armored platform with the gun. It was necessary to urgently raise it. But only six-ton jacks were located, not one steam-locomotive was around. But gun car with the weight of 70 tons. What to do? Keenness rescued. With the aid of the rails and the jacks they raised one side of car, corrected route/path. They also raised the second side. They placed car on the rails. They went further.

Four days they broke through with combat railroad workers in the drection of Grebenka. Fascist aircraft dispersed the leaflets, in which they proposed to Soviet soldiers to surrender to captivity: "Moscow and Leningrad are taken. You are surrounded. Resistance is useless ... "On one of the days of battle trains were detained in the destroyed route/path. Hitlerites used this cessation, surrounded column. Railroad workers allowed to approach enemy up to a close distance, and then opened fire, showered with grenades. Fascists were stopped, and our soldiers went into the bayonet assault. Germans retreated.

On 27 September were used up last shells and cartridges. To repulse an assault of enemy they have nothing. The group of demolition men mined and exploded armored train and entire rolling stock of trains. They decided to break through to them in small groups.

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Far from all succeeded in passing the front line. Major M. P. Malyavkin together with the group of soldiers fell into captivity. In combat perished the assistant to battalion commander on technical section the military engineer of 2nd rank M. Ye. Yeshchin, the company commander of mechanization V. I. Tarasov, the commander of educational company captain D. V. Mennichenko and many others.

If the reader happens to be at premises of the Kiev urban council of the deputies of workers, he will see the memorial plaque there established/installed in the honorary place. On it gold engraved are the unit designations and large units of the Red Army and the people's militia, that participated in the heroic defense of Kiev in 1941. And among them 75, 76, 77, 79th construction-track and the 31st bridge railroad battalions.

After using the defeat of the troops/forces of the southwestern Front, enemy began to press home the attack to the east. At this time our brigade covered and placed obstacles in the sectors Bakhmach - Konotop - Vorozhba - Belgorod; Belgorod - Kharkov and Belgorod - Kursk. To service such large sectors it was necessary because our

adjacent units, the 1st and 4th railroad brigades, from the middle of August were transferred into the composition of the standby Front, which covered near routes of approach to Moscow and then that merging with the Western Front. There these brigades remained. Moreover, in the a very very difficult position the 19th brigade proved to be. This large unit was formed only during February 1941, 4 months prior to the beginning of war. Commanded brigade experienced railroad worker Major Aleksandr Nikolayevich Tkachev. As Commissar was assigned battalion commissar Vladimir Vladimirovich Polotev. I did not think during those days, that I will have the occasion with the 19th brigade to pass almost through entire war, that its commander and commissar will become my close combat friends.

A. N. Tkachev - tall, good-natured, outwardly sluggish, with a good sense of humor. In the dispute he knew how by ingenious joke to disarm enemy. War found brigade in Moldavia, whence its subunits quickly were moved in the sector Sarny - Kovel' - Lutsk. However, during the first days of combat Aleksandr Nikolayevich was wounded, but at the hospital he lay not long. After recovery again he began the execution of his responsibilities.

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It was frequently for me necessary to meet and to talk on the

telephone with the commissar of brigade V. V. Polotev and with the commander of the 9th transportation-construction battalion captain I. V. Sytnik. Before the capture by the Germans of Bakhmach and Konotop the brigade serviced sector Chernigov - Nezhin. With fighting units of the brigade escaped the encirclement through Priluki and Romodan, after sustaining heavy losses and after losing materiel.

Thus, under the continuous bombings the units of our brigade transferred to the new sectors. The staff/headquarters of brigade had just arrived at Belopol'ye station, not far from Vorozhba, when from the adjacent station Torokhtyanyy it was reported that the German aircraft bombed out armed train. Fire was begun, fire any minute now will be thrown on other cars.

What to do? There are no units of ours hereabout. We gather all, who at this time were situated in the staff/headquarters, on motor vehicle we take off for Torokhtyanyy station. Discovered to our eyes picture was not of the pleasant ones. Cars burn, continually thunder the bursts of shells and aerial bombs, squeal fragments. Above the station, similar to the crows above booty, circle German aircraft.

We order the not touched by fire cars to be pulled onto the stage. From cover the train brigade ran out. Engineer occupied his place in the reverse of steam locomotive, uncoupling went for the

exit switches. The Red Army men and commanders began to throw earth and ballast on the burning car. At this time the new group of Fascist aircraft appeared, changed into the combat formation, again bombing began. It was necessary to take cover. But from Belopol'ye to the station fire train arrived. From the train jumped the railroad worker, as subsequently it was explained, on duty at the steam-locomotive depot Belopol'ye. On his back he has the pack/roll of fire hoses. To the aid of railroad worker from cover jumped out the soldiers. After ordering to engineer to go in the opposite direction of the burning cars, person on duty with the soldiers began to roll out and to connect hoses. Hostile aircraft with a roar flew above the station, but our people confidently did their work. Engineer connected hose to the injector. They put out fire from the cars, on which panelling burned, with powerful water jet and they removed cars to the stage. Remained the most dangerous center - ammunition consumed in flames. Under the cover of water jet for soldiers it was possible to approach it close. The incandescent metal hissed, it raised the clouds of vapor.

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Burning panelling burned the faces of soldiers. Aircraft again appeared, began to whistle bombs, echoed bursts. Anatoliy Zemlyanitsyn did not release from the hands fire-pump, continuing to

pour water on the people working in the terrible heat. Two bombs fell nearby. All froze, expecting burst. But, fortunately it did not follow it. It is obvious, did not operate the fuses. Finally cars are unhooked. Steam locomotive moved them to the different sides. All sources of fire are eliminated, and unexploded bombs are carried aside and are rendered harmless.

Thus with what risk, with what stress of forces soldier-railroad workers worked. It is necessary to say that I described ordinary, common place episode. Such problems our people solved almost daily in all sectors ....

During October for the troops/forces of the southwestern Front it was possible to organize defense on the line, Belopol'e, Krasnograd, Lebedin, Novomoskovsk. The staff/headquarters of our brigade was placed in Belgorod. During the retreat in each battalion the group of demolition men worked according to its plan. Demolition men were not trained in this affair as they should have been. During October the command element of front required us to present for confirmation a demolition plan of railroad structures left to the enemy and sectors as a whole. The period of independent activity ended. Were necessary knowledgeable, well trained demolition men. For conducting the short term assembly of the demolition teams into Kharkov arrived well known miner Colonel I. G. Starinov. Starinov

acquainted the students of these assemblies with the construction of the mines of different systems, including delay action, described, how it is necessary to establish/install such mines, to camouflage and to mark them in order if necessary to reveal/detect them by themselves.

For the first time we heard then from Ilya Grigor'yevich about the electrochemical and clockwork fuses and the contact makers, about the vibration mines of momentary effect, road mines DM and the unextracted NM, which explode from the least jolt. This entire new technology made it possible under the field conditions to install both objective and railroad mines of the instantaneous and delay action. The latter could be established with the delay from 2 days to 6 months.

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Behind Ilya Grigor'yevich there was a large combat route. He participated in the struggle of Spanish people against the fascists. He was wounded in the Finnish campaign. There he led the activities of miners - he placed obstacles. Starninov knew his business thoroughly, made many improvements, himself invented much.

The exercises, carried out by I. G. Starinov, gave to our

demolition men very much. They in a new way began to look at some questions of the placement of obstacles and their organization.

In two weeks of October the workers of Kharkov plants on the long ago copied armament remaining after evacuation knew how to prepare 1500 sets of the delayed action mines, including 500 antivehicle ones, airtight, suitable for instalation under any conditions. There were simultaneously released even 1000 mine-surprises. For the installation/setting up of mines it is necessary to make bore pits. And thus Kharkov engineers designed, and workers prepared 100 special augers. The aid of Kharkov people allowed us to mine Kharkov junction and sectors adjacent to it: Kharkov - Belgorod, Kharkov - Gotnya and Gotnya - Belgorod. Besides our 5th brigade delayed action mines placed also the 13th and 27th brigades, four separate engineer battalions and the individual group of Kharkov school of NKVD. The enthusiasts of blasting affair appeared. Among them - our specialists of combat engineers S. V. Brykin, P. A. Frolov, V. S. Onofre, Major V. R. Vask, Junior Sergeants A. A. Zemlyanitsyn and G. M. Tatarinov. By our demolition men were installed 1300 mines of delayed and instantanious effect.

On the Kharkov junction the 13th brigade, which Colonel S. A. Stepanov commanded placed obstacles. The destruction of the reinforced concrete viaduct, which connects Sverdlov street with

Kholodnaya Gora, was charged to the group of the demolition men of the 82nd battalion. Senior Lieutenant Tarasov headed group.

Demolition men excellently understood the tactical value of this viaduct. It let pass truck and animal drawn transport through all station ways of southern direction. With the removal from operation of this structure/installation the communication between two parts of city ceased and railway traffic southwards was cut off. Therefore group thoroughly prepared viaduct for the explosion.

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Charges on the span structures were attached. Supports were mined. Under the abutment from the side of Kholodnaya Gora the explosives with the delayed action mine were placed.

Tarasov was ordered, after letting pass friendly troops, to wait for appearance on the viaduct of German tanks and only then to produce explosion.

Our troops/forces thus passed. The streets of city became deserted. Passed hour-second .... From a distance was heard the roar of motors, and on the crest of Kholodnaya Gora appeared German tanks. After them the motorcyclists, motor vehicles with the infantry moved.

Demolition men frone in their covers, they await, when Germans enter to the viaduct. Among the demolition men was located modest, unremarkable Red Army man M. Kh. Karayev. Together with the comrades he patiently awaited the approach of fascists. Each instant seemed eternity. The clank of tracks increased. Still several seconds - and three tanks, and after them several motor vehicles jumped out to the viaduct, conducting fire in motion. Lieutenant Tarasov set fire to fire-conducting cord, but it flared up and here it went out. Tarasov fell, wounded by stray bullet. To again ignite cord already there is no time. It burns 15-40 seconds. In time will jump across viaduct the tanks of enemy, while after them the infantrymen. They will not allow the explosion to be carried out. Each instant is dear! And glorious son of ossetic people Mohammed Karayev makes decision. Courageous soldier under the nose of Hitlerites ignites detonating cap. Terrible explosive force. Together with the viaduct German tanks and motor vehicles fly to the railway lines. No longer exists also courageous soldier-railroad worker Mohammed Karayev.

Obstacle on the Kharkov junction were set according to the plan developed by us. This made it possible to destroy the most important objectives and, furthermore, to leave "gift" to the fascists of 114 mines of delay action. These mines exploded for a period of 5 months. Five months exploded the ground under the feet of Hitlerites, and all this time railroad junction was inactive. Colonel I. G. Starinov

after the freeing of Kharkov testified: "Of 315 mines of delay action, set by the 5th and 27th brigades, Germans revealed/detected only 37. Of this number they rendered harmless only 14 mines, the rest exploded. In the mined railroad sectors, adjacent to Kharkov, 106 German trains were blown up, are destroyed 9 bridges and viaducts, are annihilated 36 motor vehicles, 3 tanks and 2 tractors".

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In the middle of October the military council of the southwestern Front ordered to install along the rivers Severskiy Donets, Oskol and Don three lines of obstacles. In accordance with this order to us it was proposed to develop the project of the demolition plan of railroad lines. During several days we developed this project and presented it to the command element of front for confirmation. With some amplifications our project was affirmed, and I obtained instruction to carry out the preparation of lines for the obstacle, which was rapidly done.

Time passed, our troops/forces withdrew to the new positions. But order for organization of obstacles did not arrive. I began to be worried. At this time I was called into Belgorod by the commander of the 21st army lieutenant general N. V. Gorodov and he warned me:

- Without my order no destruction on the road are to be carried out !

I did ask Gordov:

- When is it possible to expect obtaining order on the organization of obstacles?

- Tomorrow morning!

Calmed by the assurance of commander, I went into the staff/headquarters of brigade, which was arranged/located several kilometers from the city. But situation at the front with each hour got worse. Our rifle units already left Tomarovka station, located 32 kilometers from Belgorod. About this I learned from the commander of the 77th battalion Major P. I. Korshunov, who covered this sector. P. I. Korshunov's battalion prepared already for the destruction of Belgorod station and the bridge across the Severskiy Donets. After sleepless night the misty morning comes, but there still is no order of General Gordov for the organization of obstacles. I ring on the telephone to Belgorod. The commandant of city communicates that the staff/headquarters of the 21st army was relocated. In the city the staff/headquarters of the cavalry group of General Pavel Alekseyevich Belov was located. I telephoned to Belov. I report:

- I ask your written permission to explode the bridge across the Severskiy Donets and for setting up obstacles in the sector from Belgorod to Goten.

- Why, until now, bridge is whole and obstacle are not set?

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I explained to the corps commander the reason. He ordered immediately to begin the destruction of structures/installations according to the affirmed plan. I immediately give order for the organization of obstacles to Major Korshunov. After obtaining of my order was begun the difficult combat work of the miners of the 77th battalion. Commanded detachment the deputy commander of battalion on technical section the military engineer of 2nd rank Mikhail Ivanovich Perlov. For the cover of the work of miners General Belov isolated armored train.

Mobile detachment together with the armored train was directed through Tomarovka toward Goten'. Station was already occupied by Germans. In spite of this, demolition men began the execution of their task. Literally under the nose of enemy they exploded the

viaduct above the railroad line to the sugar refinery. Delayed action mines simultaneously on main track were placed. Behind the viaduct, a half a kilometer - high mound. Also it was necessary to mine it with the mines/fougasses of large power and to place explosive time-delay device. They began the digging of shaft. In order to hide trails, they threw earth on the ponchos. They dug up shaft at depth of two meters. In it Junior Sergeant Anatoliy Zemlyanitsyn went down. He laid explosives and just began to install explosive mechanism, when fascists from three sides opened fire on the detachment. Taking up positions of combat security, unit military engineer of 2nd rank M. I. Perlov, Lieutenant A. I. Grach, sergeant G. M. Tatarinov and the group of soldiers withdrew along the slope ant of mound to the cutting. Defense was taken up. In the mine shaft on the explosive Zemlyanitsyn remained. Mines and shells all around exploded, bullets whistled. Anatoliy awaited, when fire ceases. Suddenly he heard the voices of fascists, who clamber on the mound. Cannot delay more ! The autumnal drizzling rain came down. Clay soil slipped as soap. Zemlyanitsyn gripped mine fuse, assembled all his forces and like lightning jumped out from the shaft. Before the eyes of the Germans astonished by the surprise he jumped across mound and head over heels rolled down into the cutting to his comrades.

Enraged by the audacious blow uo of viaduct, Germans decided to annihilate miners. For this the Hitlerites sent two strong groups.

One, armed with small arms and mortars, encircled dare-devils, other cut off from them armored train with fire of several artillery guns in order not to give it the possibility to support detachment.

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From the fire of the artillery of Hitlerites the armored train was forced to be concealed at the adjacent station Sumovskaya. Miners remained without cover. Autumnal night came. Using the dark, miners with difficulty broke away from their persecutors and moved out to Sumovskaya station, where with the dawn again they began to place obstacles. But Germans went on the heels and at the following station Gertsovka fired on the combat security unit. It was necessary to fall back to Tomarovka station, where armored train met the miners. In Tomarovka together with the organization of ordinary obstacles it was necessary to explode the large bridge through Vorskla. Armored train accepted combat with Hitlerites that pressed from all sides, repelled several raids of German aviation. Under its cover the miners exploded bridge and here under bank abutments at a large depth they placed powerful/thick mine/fougasse with the delayed action mine.

Thus three days and three nights, from 20 until 22 October, detachments of M. I. Perlov placed obstacle in the sector Gotnya - Belgorod. Miners fulfilled plan almost completely. In the hidden

places they left 89 mines of delay action. Furthermore, they installed many dummy mines, surprises and mines of instantaneous effect.

After the liberation of this section of the railroad from the Hitlerites we learned, that enemy at first attempted to restore the line Gotnya - Belgorod and even opened along it movement. But even in the restoration process on our mines exploded three trains and several motor vehicles. Perished more than 60 hostile soldiers and officers. But soon were actuated powerful mines under the bridge in Tomarovka station. At the moment of burst on the bridge heavy military transport with the dual thrust was going. In the river both steam locomotives and 42 armed cars fell. After this burst up to summer of 1942 the sector was inactive. The enemy had little success in locating our mines. Of 89 pieces they detected 16 only, i.e., less than 20 percent.

At the same time, in the days of the offensive of the Red Army, they introduced me to journal of one of the killed German officers. In it was indicated that mass mine laying in the area of Kharkov and Belgorod produced strong impression on the German soldiers and the officers. The losses of the German troops/forces from the burst of mines were imposing. "But the most terrible, wrote German, are mines on the railroad, where the derailment of only one train in the

sector, in which the normal movement of trains was restored caused the death of more than 100 people ... ".

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November advanced. The staff/headquarters of brigade from Belgorod area moved to Valuyki. Here we greeted 24th anniversary of Great October. With enormous excitement we listened to the report of I. V. Stalin at the session of Moscow advice/council and his speech at the parade of the Soviet troops/forces on Red Square. Political workers immediately brought their content to each soldier. Parade on Red Square strengthened the faith/belief in our victory, rendered enormous moral and political effect on the commanders and Red Army men.

During the rainy November days our brigade dealt with disassembly and evacuation of the alternate tracks. Germans in our sector were played out, they were stuck in the impassable chernozem and they were no more in the condition to advance. And we did not yet place obstacles. Brigade evacuated the alternate tracks from the sector Kupyansk - Valuyki - Kastornoye. Rails were required for the new lines in Western Siberia, in Urals and in Central Asia. There on the base of the plants evacuated from west and south of the country powerful industrial complexes were created. Sector from Kupyansk to

Urazov belonged to north-Donetsk road. Managed this main line the former notable engineer Peter Fedorovich Krivonos. After learning, that we remove the alternate tracks and load rails on the platforms, he decided: "They dispossess road." Without having informed me, Krivones ordered all platforms loaded by us to be sent not to the east, but to the sector Valuyki - Lugansk.

This misunderstanding occurred through the fault of the NKPS. Leaders of people's commissariat did not inform the commander of road about their order. This did not do also the commander/chief of VOSO of front and the commander of our corps General N. A. Prosviirov.

Telephone and telegraph communication with the people's commissariat of lines of communication performed without interruption. Therefore, I, as brigadier general, was informed about matters of adjacent large units and I knew about the situation of the railroad troops/forces of West, Leningrad and other fronts.

5-6 December of 1941 the troops/forces of Western, Kalinin and southwestern fronts passed into the counteroffensive.

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Before the railroad troops/forces and the detachments of

special-formation entirely new problems completely. From the destruction of roads it was necessary to switch over to their restoration. The Red Army within the period of counteroffensive in the environs of Moscow freed more than 5 thousand kilometers of roads, of them about half was destroyed to the base.

The offensive of the Red Army in winter of 1941/42 years showed not only the strong, but also weak places of the railroad troops/forces. First of all became known the duality of subordination. At the front our troops/forces were subordinated to the organs of VOSO, which actually answered for the restoration of roads. But NKPS provided the railroad troops/forces with materials, equipment and tools. And it is necessary to say, it provided it incompletely, and, in an insufficient quantity. The difficulties were manifested, which the country and its industry were experiencing. Therefore our units were weakly equipped with equipment and transport means. Combat situation did not suffer duality in leadership. Organizational confusion led to gaps between the rates of advance of the field troops/forces and the restoration of rail track. Railroad units restored 2.5-4 kilometers of route/path in a 24 hour period, and the field troops/forces attacked/advanced several times more rapidly. Some rifle/infantry large units moved away from the railroads by 120-150 kilometers.

For the elimination of the reasons, which prevented the normal combat activity of our troops/forces, and the establishment of a single centralized leadership of the railroad units GKO, 3 January made a decision, by which the leadership of all works on the restoration of railroads was laid on the NKPS. All railroad troops/forces, subordinated to NKO, were transfered to the NKPS with the simultaneous operational control to their military councils of the corresponding fronts. By the resolution of GKO was provided for also an increase in the strength of our troops/forces and special-formations of the NKPS.

In the composition of the NKPS the Chief Directorate of Military Reconstruction Work (GUVVR) with the staff/headquarters of the railroad troops/forces and the political department was created. Were simultaneously formed several special organs, which must provide restoration works with design documentation, lumber and constructions/designs.

As the first commander/chief of GUVVR was assigned the national commissar of lines of communication.

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But in view of the fact that the People's Commissar even without this

had a lot of work, he transmitted these functions to his deputy for capital construction I. D. Gotseridze without releasing him from his previous responsibilities. This combination was beyond Gotseridze's competence. Then to the post of the commander/chief of GUVVR was assigned experienced cadre railroad worker, participant in the civil war the Major General of the technical troops/forces V. A. Golovko. In the peaceful years he commanded training bridge regiment, he was the commander/chief of the bridge department of military-transport academy, and then he headed the military construction organizations of the Far East. Chief of staff of GUVVR was assigned the deputy commander of the special group of the railroad troops/forces Colonel F. N. Doronin. For the leadership of railroad units in the composition of GUVVR the control of the railroad troops/forces with its staff/headquarters was created. Were formed these organs in essence from the supervisory personnel of the particular corps and restoration department of the administration of VOSO of the Red Army. The control of the railroad troops/forces headed the commander of the special corps the Major General of the technical troops/forces N. A. Prosvirov, the military commissar - brigade commissar S. N. Belyayev.

As the first deputy commander/chief of the control of the railroad troops/forces was assigned Major General of the technical troops/forces A. E. Kryukov, as chief of staff - Colonel P. V. Mikhaylov. The political department of the railroad troops/forces was

headed by brigade commissar V. F. Fedorov.

The resolution of GKO determined also the structure of GUVVR. At its basis it copied structure of the NKPS. Central board consisted of the restoration administrations: bridges, rails and structures/installations, communications/connections, drive units and material and technical supply. On the post of the commanders/chiefs for these administrations of the prominent leading workers of transport were invited. One of the experienced bridge builders N. A. Kholin headed the administration of the restoration of bridges. N. N. Sokolov arose in the leadership of the administration of rails and structures/installations. To B. I. Levin was charged the organization of planned economic affair, to A. V. Kondrashev - material and technical supply.

By the resolution of GKO were determined laws/rights and responsibilities of GUVVR. The preparation of material base for restoring of tracks and bridges was primary task.

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The basic efforts/forces of the railroad troops/forces and special-formations it was proposed to concentrate at the given moment on the restoration of the decisive directions: Moscow - Bologoye,

Tikhvin - Leningrad, Ozherel'ye - Uzlovaya - Yelets - Voronezh, Tula - Kursk, Moscow - Mozhaisk, Yelets - Orel.

In the composition of fronts the commands of the military reconstruction and barrage works of front (UVVR) were created, which copied structure of GUVVR. The commander/chief of UVVR commanded the railroad troops/forces and the special-formations of the NKPS in the borders of the front. In operational sense he was subordinated to the front commander, and on special questions - commander/chief of GUVVR.

There were at first created three UVVR: at the Leningrad, southwestern and Western fronts. During January they freed me from the post of the commander of the 5th brigade and assigned me as deputy commander/chief UVVR-3 and the commander/chief of the railroad troops/forces of the southwestern Front.

Into the composition of UVVR of the southwestern Front entered four brigades - 5, 13, 19 and 27th.

Besides them in our UVVR was included another number of the special-formations of the NKPS, including advance repair train No. 7, water repair train No 13, railways communications repair train No 14.

The former deputy commander/chief of L'vov road Aleksandr

Isidorovich Grigoryev headed our command.

As chief engineer for the command was assigned outstanding specialist bridge builder Grigoriy Isaakovich Zingorenko. In the field of transportation he had a reputation as man, who little speaks, but does much. Colonel S. V. Brykin headed the staff/headquarters of the railroad troops/forces of front.

At the head of the operational and restoration affairs of front was placed the representative of NKPS, the deputy of Peoples Commissar of lines of communication, the member of the military council of the southwestern Front Vyacheslav Petrovich Yegorov. Under his management the command cadres of our UVVR-3 were brought to strength. In this affair Vyacheslav Petrovich invested much labor/work and energies.

The reorganization of the railroad troops/forces occurred in the period of the rout of Germans in the environs of Moscow. Complexity consisted in the fact that this entire process of reorganization not in the least form was reflected in the combat activity of large units.

On 11 January, 1942, the chairman of the Presidium of the Supreme Soviet of the USSR M. I. Kalinin visited the construction of the bridge across Shosha river at Zavidovo station.

Visit by M. I. Kalinin of Shosha bridge made deep sense. Before the railroad troops/forces new crucial tasks were placed. It is obvious, Mikhail Ivanovich became acquainted on the spot with the combat readiness of our units for the accomplishment of these objectives. On 5 February, 1942, he came forward with the article "On the way to victory" in the newspaper "Red Star". In his article All-Russian senior man wrote: "Now before the railroad workers stands another, more noble task. Following the advance of the Red Army it is necessary to restore railroad bed, bridges,, as fast as possible and nearer to the front to advance the trains. Work is difficult and not so much by performance itself, as by need for producing it in the shortest time. The more is reduced the recovery time of restoration of tracks, the nearer will be the railroads to the front, the stronger the Red Army can deliver blows against the enemy ... "[1].

FOOTNOTE [1]. The "Red Star", on 5 February, 1942. ENDFOOTNOTE.

On 6 December, 1941, passed into the offensive the right flank of the southwestern Front. Was liberated the sector of the first stage on the line Kshen' - Marmyzhi. With an enormous feeling of

gladness the soldiers and the commanders of the 79th track battalion of the 5th brigade moved out for the restoration of the bridge across Kshen' river. For the first time in the war they did not destroy, but created! Workers of bridge train helped battalion. The eyes of builders burned, hands were straining for work. I looked on them, and my heart was filled with pride for our Soviet people, who do not imagine life without creative, noble work. We were glad at the first restoration works also because the retreat ended and the rout of fascists was close!

We worked under the slogan: "Each strike with pick on the earth - this is strike against the enemy"!

January cold weather was severe, with northern winds that chilled to the bones. Land, like iron, did not yield to breaker, nor pick. Each centimeter of foundation area was taken by force. It is not easy under such conditions to restore a bridge. But times are hard - it is necessary as quickly as possible to send armored trains to the sector Kastornoye - Marmyzhi.

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This was our first serious test/sample of forces. But experience is small. At the very beginning of works they insufficiently solidly

prepared base under the crib, and river undermined its nose section. The frame established/installed on the crib was distorted. To the elimination of defect the commander/chief of bridge train asked four days. We did not have available this time. To straighten slant undertook engineer P. A. Frolov. He proposed to hang out frame trestles with the aid of traversing screw jacks and to bring wooden bars under the skewed unit of the frame. Affair undertook the company commanders captain Vpychenko and Senior Lieutenant Chernishev, the political instructors Dunyakhin and Potapov, platoon commanders Senior Lieutenants Sen'kin, Shan'gin and Shevchenko next arose. To their commanders were attached the sergeants Burnul'skiy and Petrichenko. P. A. Frolov led works. Five hours continuously worked the group of volunteers, commanders and sergeants, in the ice water. The slant of frame was removed. Across the bridge the armored trains accurately in time went. They passed to Marmyzhi station and helped the rifle division to knock out Germans from it. The troops/forces of our front finished offensive operation on the western shore of river Tim.

During these winter days a large group of soldiers and commanders of the 5th brigade for the combat successes was rewarded with orders and medals. I was rewarded with the combat Order of the Red Banner.

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THE TURNING POINT.

Winter gradually gathered force. Snowfalls were begun, January frost began to crack. Along the steppe expanse ice wind raged. Chilly, it was uncomfortably all around. And above the Severskiy Donets in the area of Izyum thus already how many days had howled snowstorm. On 18 January, 1942, into its ominous voice were intertwined thunder rolls, as if escaping from under the ground. Here was heard our artillery. The Barvenkovo-Lozovskaya offensive operation of the troops/forces of the southwestern and southern fronts had begun.

By 31 January, 1942, the Soviet troops/forces moved at the depth to 90 km on a front to 110 km, took large terrain sector in the triangle of Balakleya-Lozovaya-Barvenkovo. The possibility to encompass the Kharkov and Donbas grouping of fascists appeared. But it was impossible to carry out this mission. Enemy supplemented his forces and began to counterattack. Furious fighting flared up.

The railroad troops/forces of our UVVR restored the liberated sectors, and the technical cover of the main lines, which go to the front, was carried out by the part of the forces.

In one of the January days the commander/chief of the 2nd bridge detachment I. Yu. Barenboym called me in and described about the selfless action of engineer-captain Mikhail Merkulovich Mukonin. And this is what occured.

For Hitlerites it was possible to squeeze our unit and to move out to the Severskiy Donets. Against the bursting out fascists the command element threw the 6th and 131st tank brigades.

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Together with the infantrymen the tankers intercepted the enemy and threw him back. After combat the 6th tank brigade obtained order to arrive at another front sector. Route/path there lay/rested through the Severskiy Donets. But all bridges are exploded, but there's no time to lose. Brigadier general decided to skip across the river on ice.

The first two vehicles passed safely. After it on ice two additional tanks entered. Ice did not maintain/withstand and tanks went into the river. Tankers brought tank-tractors. Dare-devils were dropped into the water, set cables. They stretched. Tanks - not from the place. The viscous bottom already sucked in track. Another effort/force - cables broke. More than two days attempted tankers to raise vehicles. Everything is in vain.

Near the Svyatogorskaya station, not far from the place of incident, the 2nd bridge detachment overhauled the damaged by Germans railroad bridge across the Severskiy Donets. Tankers turned to the commander/chief of detachment with the request to help them to take out the failing tanks. Isaac Yulisovich together with the commanders of detachment arrived at the break, they attentively inspected it. Engineer captain M. M. Mukonin, after measuring and after calculating, said to Barenboym:

- I want to try to take out vehicles.

Tankers were gladdened.

Mikhail Merkulovich asked to stretch tarpaulin tent near trough, to install iron oven in it and to heat it so that in the tent it would be hot as in the bath. They prepared several sets of

clothing/uniform and underwear, physicians removed their reserves of rubbing alcohol. Meanwhile under the leadership of Mukonin soldiers installed on the shore three five-ton winches. They passed cables for extracting the tanks through the block-and-tackles in order to soften the force of the jerk of a tank-tractor.

And thus soldiers bound captain with cords, in his hands they gave signal end and carefully they lowered him down into the ice hole. In the ice water for a long time you cannot stay. One-two worker's movement - and upward ! Several times it was necessary to dive only in order to tighten vehicle to the cable. After each dive the captain changed clothing, he got warm.

And the first vehicle is thus to the shore ~~removed~~ derived. To it the tankers ran up, they inspected. They began to overhaul motor, toward evening the tank was in motion.

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Tankers sincerely thanked Mukonin, comrades, deputy commander/chief of bridge detachment of the political division engineer captain G. P. Ratner, secretary of the party organization engineer major Ya. I. Marusiy congratulated him with the success.

In the morning of the following day on the bank stood the second vehicle.

In the days of the offensive of our troops/forces the 79th battalion of the 5th brigade, after finishing the construction of the bridge across the Kshen' river, obtained order to begin the restoration/reduction of line Kshen'-Cheremisinovo. To technical reconnaissance of stations and stages to Cheremisinovo the commander Major M. S. Smirnov directed the group of demolition men headed by P. A. Frolov.

Night. Around bare steppe. Frost wind penetrated to the bones. The soldiers, dressed in the sheepskin coats, earflap caps, felt boots, warm gloves, joked:

- To Germans it's paradise in this frost. They have overcoat of fish fur.

Everyone excellently knew that the Hitlerites were dressed in the thin overcoats and ersatz felt boots.

- their teeth are rattling like drums. For life they will remember how it was to fight with us !

- They arrived for wool, they drape themselves with shearings.

- The frost is not great, and we are not ordered to stand! - Frolov hastened the scouts on.

At dawn they arrived in Marmyzhi. Station routes/paths and points and crossings are blown up. On the entire territory of station are scattered where it fell trotyl cartridges and charges from them. In the wooden poles of the lines of communications holes are drilled. In them boring cartridges are packed. Apparently, Germans did not have time to explode them.

The stage of Marmyzhi-Raskhovets was destroyed incompletely. The rails torn away from the ties were suitable for the track laying. At Raskhovets station the scouts revealed/detected not one whole structure/installation and construction. For Cheremisinovo combat still occurred. They could not go further. From Raskhovets they returned to Kshen'. They reported to commander about the results of reconnaissance/intelligence. They ate, warmed up and only lay to rest - when came running runner from the staff/headquarters. The 13th guards rifle division of Colonel Rodimtsev freed Cheremisionovo. To Frolov's group it is ordered on horses to leave for the station and to reconnoiter the bridge across the river Tim. Again dark/nonluminous blizzard night. Beyond ~~the~~ Marmyzhy the sky was cleared away, from

behind the clouds the moon swam out. Sleigh route/path was broken on the steep/abrupt snow-covered shore of river Tim.

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The collapsed metallic farms/trusses of bridge below showed up black. On the opposite bank the flares painted the sky in gay colors, first abated, then rifle and machine-gun firing intensified. Scouts silently scrutinized the white river bed of river flooded with lunar silver. How is it best to approach the fragments of bridge? Hitlerites for sure mined vicinities. Lieutenant K. Shangin broke silence:

- yesterday I read in the brigade factory newspaper, that the Germans in our front sector place the jumping mines.

- what kind of beast are we dealing with? - asked Lieutenant G. Shevchenko.

Frolov described to scouts that as arms of the Fascist-German army is located antipersonnel fragmentation mine SMi-35, or "spinging mine" ("jumping"). On being actuated, these "skipping-ropes" discard the steel cylinder, filled with 340 balls/spheres. Cylinder explodes at the height/altitude about a meter above the ground.

Frolov advanced the combat security unit, he dispersed part of the people on the bank of river, and himself with three scouts went down to ice.

From the bank to the bridge the path went. In the middle of river it bifurcateed. One trail ran further to the bank, another to the bridge. Pavel Andreevich ordered to the soldiers remaining with him to strictly observe distance and to advance accurately on his trail.

- approaches to the bridge, possibly, are mined ! - He again mentioned.

Everything was understood: the least blunder - death. Here is the destroyed truss. Frolov got pencil and notebook from the field bag. Before removing/taking diagram, he estimated by rule of thumb the sizes/dimensions of bridge and the degree of destruction. Length of the bridge of was 50 meters, height/altitude - 10. Span structure with the ride on the bottom is smashed into two units. Their ends are collapsed into the river. Supports are not touched. It is good ! And he only wanted to drop down on his knees in order to write all this, when as if someone invisible touched him ! Suddenly the experienced

eye of miner noted the dark/nonluminous hair of wire bared from under the snow. Pavel Andreevich shouted:

- Don't move !

"File" froze. Frolov inclined above the hardly noticeable hair, stretched across the path, and bared by the wind. One more step - and end !

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Grigoriy Shevchenko following him said:

- by instructions it is forbidden by night to clear mines.

- yes, it can't be done !

They decided from this point to make a sketch of the bridge and, after returning to the unit, to call miners.

To Kshen' the hungry, throughly frozen bunch, returned at dawn.

For the restoration of the bridge across the river Tim we placed the 79th track battalion, bridge column and gorem No 7. The

staff/headquarters of the 79th battalion was relocated from Kshen' to Marmyzhi. To the same battalion they assigned the restoration/reduction of routes/paths in the liberated sectors of Kshen'-Marmyzhi-Raskhovets and Marmyzhi-Livny. Track works - one of the labor-consuming works in the field of transportation, and in winter they are ~~heavier~~ doubly and triply harder. Soldiers nibbled with picks and by scrapers the frozen ballast, to the perspiration, to the bloody blisters on the hands. In the January frost they worked without the overcoats, in the service shirts. From the wet service shirts vapor rose up, backs were covered/coated with lines of hoarfrost.

The bridge across Tim was restored according to the less stringent technical standards. By project it was provided for to bring bank supports, to raise on them the surviving halves of span structure, and the middle of bridge to cover with packets of H-beams. However, the first days of restoration works showed that too much effort and time was required by this project. And we had no time to spare.

The military council of front hurried us with the restoration of the Tim bridge. I was nervous. The bridge was small, simple in its design, and we spend too much time on it. I and P. I. Bakarev went to the place of works. We had just inspected the front of construction

and climbed up on the mound, when our antiaircraft battery began to fire. Three German aircraft circled above the forest, approaching for bombing. Commander Major M. S. Smirnov proposed to us to descend from the mound and to take cover in the dugout.

- now they will begin to bomb from low altitude.

We had just gone down into the dugout, as the crash/grating of explosions/bursts was heard. Aircraft rapidly flew away. Smirnov said:

- They passed over it seemed ! It seems, no one was caught.

After several days bridge was put into use. First on the finished bridge they passed armored train.

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It nearly ~~precisely~~ approached Golovinka station all the way and it notified Germans by the roar of its guns, that it is time to move on. To provide proper working order of route/path for the armored train the commander of the 79th battalion assigned to the 3rd company captain Voychenko. Each morning company escorted armored train. Continually was necessary to repair the damaged during the artillery

duel components of bed of the road. Hitlerites began to hunt for the armored train, additionally pulled up artillery. With the aid of the reconnaissance aircraft they located the area of its parking and conducted aimed fire. Once German shell smashed rail, mangled several ties. The group of armored train poorly corrected damage with its forces. Steam locomotive backed up, the in a hurry the fastened rails seperated, on the ground the steam locomotive and an armored platform ended up. "Frogs" for raising the platforms on the armored train were missing. To the place for accident the 3rd company approached, which aided the group to place armored train on the course and to withdraw in the rear.

Two days after this incident the demolition men of technical reconnaissance of battalion on the approach to Golovinka station detected German antitank mine. It was set under the rails at that place, from which our armored train usually conducted fire/light. On snow the scouts detected the trails of skis. By the trails they established that five Germans came. Trails ledto the crossing. What to the fascists was necessary here? They inspected terrain, in the cabinof path inspector they found antitank mine. This "gift" Hitlerites, obviously, prepared for our 3rd company, when that arrives to the aid of armored train. Now before each going out of armored train to the stage our miners attentively verified route/path and terrain adjacent to it.

P. A. Frolov interested himself in diversionary mine discovered on the crossing. First of all he thoroughly inspected the site of installation of mine. He was struck by the haste, the carelessness in the work. It is obvious, our night patrol disturbed Germans. But they did really place only one mine? It cannot be! Searches/scannings were begun. In the bed of highway, 3-4 meters from the rails, the miners found the antitank German mine of system TMG-35 in a shallow hole. Hole was filled with snow. They revealed/detected mine without the special labor/work.

The armored train, attached of the 13th guards rifle division, played the master in the sector of Marmyzhi-Golovinka to the end of February.

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By this time the offensive of our troops/forces already ended. Local fighting occurred. The miners of the 79th battalion almost daily detected German antitank mines on the routes/paths. It became clear that the fascists placed them at night.

About the appearance in our rear of Germans Major Smirnov

reported to the staff/headquarters of the 13th division. The chief of staff of the division informed us about the fact that in this front sector the special ski battalion of White Finns is active and he promised to render harmless saboteurs. For Hitlerites it was soon possible to catch armored train in a trap. Hardly it approached the entry semaphore of Golovinka station, when they, after opening on the roadbed hurricane artillery fire, destroyed route/path behind and in front of the armored train. Artillery duel began. For fascists it was possible to smash armored steam locomotive, to mutilate the armored platform. Night came. Duel ceased. The group of armored train collected its killed and wounded and withdrew to the rear.

To protect armored train remained the platoon of the 3rd company of the 79th battalion. Germans decided, that the train was thrown by group to the arbitrariness of fate. They drove on steam locomotive and began to repair route/path. Platoon commander Senior Lieutenant Moskovchenko crawled up to the Germans and he understood everything. After returning, he said to his people:

- Foul creatures repair the steam locomotive route/path. They want to drive away our armored train !

Soldiers concealed themselves behind the steel bulky object. They await ! Thus Hitlerites approach very near. Following them the

steam locomotive ~~will~~ pants. Submachine guns and rifles of railroad workers harmoniously bark. Germans broke into a run. Left also the locomotive. On snow remained the killed and wounded. But on this fascists did not rest. They began methodically to strike the armored train from the guns and the mortars. As soon as someone appeared in this area, the fire immediately began. We took reciprocal measures. Major Smirnov directed entire 3rd company toward the defenses of armored train. Three days company defended it. The damaged route/path at night unnoticeably was repaired. Directed the works the company commander himself captain Voychenko. Restored route/path volunteers - the most courageous soldiers. Voychenko created from them two groups. As commanders of groups were assigned privates first class Ivan Arapov and Sergey Kagolkin. On third night the road in the direction of Marmyzhi was ready.

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The armored platforms broken by Germans were placed on the rails. They decided to lead out the armored train in parts - thus it was more convenient. In Cheremisinovo our steam locomotive approached. Its engineer Senior Sergeant (now Colonel-engineer) Aleksey Alekseyevich Orlov waited for the dark and sent locomotive to the armored train. Steam locomotive hooked onto the rear armored platform and gave full steam. Germans were aroused, they opened fire/light. But it

was already late ....

The next morning covered with wounds armored train already stood on the routes/paths of the Cheremisinovo station. So our soldier-railroad workers saved armored train. For the successful execution of this combat operation all its participants were rewarded with orders and medals.

In proportion to the release of our territory from the enemy mine war intensified. Hitlerites mined roads, paths, crossings, ruins of buildings and structures/installations. At each step of our soldiers danger lurked. Clearing the liberated terrain from mines became one of the important tasks. In our command the special department of obstacles dealt with questions of mine clearing. The military engineer of 2 rank V. S. Onufriyev was division head. To the commands he arrived from the 82nd battalion. We knew him as man of courage, a superior specialist. They assigned P. A. Frolov as the deputy of Onufriyev.

When they organized department, then I ordered to immediately draw up a description of German mine technology and to develop the plan of instruction on mining and clearing mines of railroads. It is necessary to say that description of the mines of enemy drawn up by the department greatly helped many of our commanders to understand

their secrets. Soon I ratified the instructions for the railroad troops/forces of the southwestern Front developed by the department of obstacles. They sent the copy of this instructions, also, to the staff/headquarters of the Chief Directorate of Military Reconstruction Work of NkPS [99sp4 - People's Commisariat of Railroads]. After certain time I obtained letter from the division head of obstacles of GUVVR Colonel V. A. Antipina with the request to send as many as possible different models of German mines and fuses, and also the description of their construction. Antipin thanked us for the instructions and communicated that it will be sent out to all railroad troops/forces.

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During February the railroad troops/forces and the detachments of the special-formations of the southwestern Front provided the uninterrupted work of roads, they prepared them for the obstacle, evacuated national-economic equipment. Disassembly and shipment into the rear of rails and attachments was large labor-consuming affair. They continued to remove/take the alternate tracks in the sectors of Kupyansk-Valuyki and Valuyki-Kastornoye.

Jumping ahead, I will say that in 1942 we removed/took and sent to the east of the country 667 kilometers of rails and 800 sets of

points and crossings. Furthermore, we demounted several sugar refineries. Alone for the armament of industrial enterprises were required approximately/exemplarily 13 thousand cars.

The first military spring unnoticeably came. In peacetime, it occurred, all were glad at the approach of this season, and now we awaited spring with the great alarm. The friendly melting of snows threatened with strong floating of ice and high waters. Will withstand them the bridges quickly restored?

The commander/chief of GUVVR ordered to all railroad troops/forces to take under special checking 110 large and average bridges, 899 small bridges and culverts, 834 kilometers of the unreliable sectors of railway line. Large, complicated was ahead. The river beds of rivers in the zone of bridges are encumbered by the destroyed span structures and by supports, by cribs, by sleeper cages by rock fill. They compressed space for the passage of spring water. We prepared for the passage of spring water and floating of ice very thoroughly. Supports and bases of several bridges were strengthened, were cleared river beds, was established 24-hour guard shifts in the most threatened areas. There were always at call our demolition men. We succeeded in maintaining bridges in their integrity.

During May our UVVR was relocated from Voronezh in Valuyki,

nearer to the front line. In this time active combat operations in Kharkov area were deployed. The troops/forces of the southwestern Front passed by the early morning on 12 May into the offensive. It was planned, with two converging attacks in the general direction of in Kharkov to surround and to annihilate enemy and to free city. Main attack struck the enemy from the Barvenkovskiy salient facing the enemy. In three days the Soviet troops/forces moved 25-50 kilometers, but they could not exploit the contemplated success.

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Hitlerites pulled several divisions of the reserve, created superiority in strength and passed to the counteroffensive. For enemy it was possible to surround in the Barvenkovskiy salient on 23 May the 6th and 57th army and the army group of General L. V. Bobkin. From 24 to 29 May continued persistent combat with the superior forces of enemy.

Was threatened the penetration of our defense line, also, in the area of Izyum. On the command of the military council of front into combat were cast some logistical units, including 84th track battalion of the 5th brigade. At this time it was resubordinated to the 27th brigade. From the autumn of 1941 the battalion was commanded by captain N. D. Zhandarov, who replaced seriously wounded G. M.

Litvinovich. Battalion covered the withdrawal/departure of our troops/forces in Kamenka area. Railroad workers repulsed several attacks of Hitlerites. In these fights entire personnel of battalion distinguished itself. The chief engineer of the battalion of military engineer of 3rd rank, I. V. Shtalin several times first rose to the attack and carried along after him the soldiers and commanders. Battalion lost a third of personnel, and fascists pulled in reinforcements. Under the pressure of superior forces of enemy the battalion began to withdraw to the crossings across the Severskiy Donets. In one of the counterattacks died fearless Ivan Vasilyevich Shatalin.

After learning about the difficult position/situation of the units of the 27th brigade, I from Valuek left to Izyum. Together with me went the chief of a service of roads of the directorate P. A. Krotenko and the division head of special-formations L. V. Vasilevsky. In Izmyum I directed my subordinates to prepare the detachments of special-formations for the evacuation into the rear, and himself found the staff/headquarters of the 27th brigade.

Brigade commander Colonel V. I. Pavlov reported, that the brigade defends city of Izyum. I asked:

- Who ordered you to do this?

- No one, its my own initiative.

In war each large unit/formation must, first of all, fulfill its mission. Our task at the given moment was to provide the survivability of railroads, to provide the rescue of military and national-economic equipment.

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I here abolished the independent activity of brigade commander and ordered to evacuate the supplies and rolling stock amassed in the sector of Izyum-Balakleya; to ensure the movement of trains on the entire line Izyum-Balakleya Izyum-Svyatogorskaya Kupyansk; to restore the destroyed bridge across Oskol river.

Brigade commander immediately issued the necessary orders. Together with him and chief engineer of 2 rank K. S. Abramov on the motor vehicle I went to the bridge. We inspected it. To our good fortune, the destruction proved to be insignificant. Are burned bridge beams and damaged is part of the rails. Supports are intact. To repair structure/installation Pavlov ordered the bridge battalion. On the second day the bridge could be used . The trains accumulated

in the sector of Zmiyev-Svyatogorsk went on to Kupyansk.

But bridge performed not long. Germans destroyed it with artillery fire. They stopped the movement of trains. For a second time restored/reduced the bridge the subunit of the 1st guards brigade and the bridge-retoration detachment No 2 of I. Yu. Barenboym. In several hours trains again went across the bridge to another bank of Oskol.

In Izyum they handed me P. A. Krotenko's telephone message. In it it was communicated that at the Tsyganskaya station during the bombing L. V. Vasilevsky was killed.

That is where occured death of the former courageous commander of armored train letter "A". Several hundreds of Hitlerites died from the fire/light of the guns of his armored train in the environs of Kiev. How often Vasilevsky pulled away his steel fortress from under the fire of fascists, every time proving to be victor in these lethal duels. But here the fragment of aircraft bomb cut short our dear Leonid Vasilyevich's life. His death shook me. But it was necessary to take oneself in hand, indeed situation at our front with each hour deteriorated.

The main lines, covered by our brigades, were under bomb strikes

and the artillery fire of enemy. The 19th brigade serviced the line of Kupyansk-Volchansk-Nezhegol'. Stage from Volchansk to Nezhegol' fascists fired on with artillery and mortar fire. Rarely any train succeded in passing this zone unharmed. The direct hit of shell obtained armed train. Car with the aerial bombs caught on fire. To help the soldiers of the 14th bridge battalion and 55th individual company of operation arrived in time.

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Fascists opened strong mortar fire/light on the burning train, without giving to our soldiers the possibility to approach the cars. The 14th battalion was commended by Major A. D. Sushko.

A. D. Sushko's battalion distinguished itself during July 1941, when in the area of Borodyanka station he engaged fascists and did not allow them to cut the line Kiev-Korosten'.¶ Together with the group of soldiers the commander and the commissar of battalion the senior political instructor A. A. Tavluy approached the burning cars from opposite from the Germans side and they unhooked train. Engineer drove out the head section of the train from the zone of fire. Unharmed rear cars were taken by the gasoline locomotive, which they brought from Volchansk. Soldiers and commanders started to rescue ammunition from the blazing cars, to throw sand ballast on the

burning crates. Work is very dangerous. It is necessary vigilantly to follow the fire. If crate is consumed by flame - depart immediately, will heat up the bombs, they will explode. Having delayed too long, the commander of the 55th operational company captain N. P. Kozarez did not have time to run off to the side. Explosion ! Captain fell. In several minutes German mine blew up at the feet of Major A. D. Sushko. Perished a courageous commander, charming person, gifted commander ....

In the morning on 30 June enemy delivered strike/shock from Volchansk area at the boundry of the 21st and 28th armies of the southwestern Front. Hitlerites penetrated into our defense at the depth to 80 km. The railroad troops/forces of front again passed to the setting up of obstacles. The 19th brigade installed obstacles in the sector from Volchansk to Kupyansk, disassembled and sent into the rear the taken/removed alternate tracks of the line Valuyki-Liski. The 18th brigade destroyed Kupyansk junction and produced the evacuation of superstructure of route/path from the sectors adjacent to the junction. After carrying out mission, the units of the 13th and 19th brigades with fighting broke through to Rossosh' that was occupied by fascists, and established control with their own troops/forces. The 27th brigade had to after the removal of trains from the sector of Balakleya-Izyum-Svyatogorskaya destroy this line.

The units of the brigade proved to be in the rear of enemy. Its main forces broke through to them across Podgornoye.

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The 52nd path battalion under the command element of Major N. S. Kruten together with the field units moved along the line Likhaya-Stalingrad. Here Germans yet did not lock the ring of encirclement. Battalion could on this line place obstacle and send 360 tons of grain to the rear, more than 300 tons of commercial steel, 112 tons of nonferrous metals and 100 tons of fuel. As a whole the 27th brigade during these days carried out from the area of combat up to 400 cars with the military and civil/civilian equipment. Supplies under the fire of enemy were evacuated. And under these conditions soldiers selected at the stations 400 empty cars, put each of them into the running condition, loaded, fastened cargoes, formed trains and gave them "green light". Enormous courage was revealed !

The operational situation at the front during those difficult days rapidly changed; therefore it was not possible to avoid many errors. But these errors could have been considerably less, if large units/formations in proper time informed about all the changes at the front. Unfortunately, there was no clear communications/connection and information at that time. We in the directorate frequently

learned about the withdrawal/departure of our troops/forces from the commanders of our subunits. The absence of information did not give to us the possibility to in advance prepare sectors and rolling stock for one or the other operation/process. Therefore for the matters, which in their labor expense required days and weeks, took us hours. These deficiencies were removed much later. But thus far weak knowledge by the railroad workers of operational situation led to the large material losses. For this reason, for example, a considerable quantity of equipment and rolling stock was left in the area Kupyansk. This is how this occurred. In one of the June days they unexpectedly called me into the staff/headquarters of front. The commander/chief of military communications/reports Colonel A. A. Korshunov met me with a question:

- Why did you destroy bridges, viaducts and rail track in Kupyansk and in the sector Kupyansk-Dvurechnaya? Do you know that in the sector of Kupyansk- Svatovo did remain a large quantity of rolling stock?

Order about the organization of obstacles in this sector I did not give. The 13th brigade of Colonel V. S. Petrov, the commander of experienced, disciplined, covered sector. I, perplexed, shrugged my shoulders:

- Without the order Petrov will not destroy sector and junction !

I ask you to leave for the place and to investigate it.

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Order him to restorewhat was destroyed and to remove rolling stock !

I arrived at the Dvurechnaya where the staff/headquarters of brigade was arranged/located. I ask Petrov, why Kupyansk junction was destroyed.

- On the written instruction of the commissar of VOSO [99sp04 - Military Communications Service] of Petrov's front.

Colonel Petrov - namesake of brigade commander. Railway division Kupyansk-Dvurecnaya passes into no man's land, along the left bank of Oskol. The 38th army here takes up defense. Germans from the right bank of river keep this railway division under the sustained fire. The movement of trains is clossed.

But possibly, combat situation will change and route/path to trains will be opeded. I went with the brigade commander into the

staff/headquarters of the 38th army. Night. The fiery northern lights are in front across entire width of horizon. From the gully, near the highway, are heard heavy guns. From the highway the motor vehicle rolled up a bumpy, dusty road, from the dark white huts emerged. I reported to the chief of staff of army Colonel S. P. Ivanov (now General of the Army) about the purpose of our visit and did ask, is it possible to expect the liberation of railroad junction Kupyansk-Dvurechnaya. Colonel Ivanov advised me to go with this question to the General K.S. Moskalenko (now Marshal of the Soviet Union) commanding the 38th army.

After several minutes the general accepted us. I described to him about the disturbance in the staff/headquarters of front by the produced destruction of sector and asked his opinion about the advisability of restoring of Kupyansk junction and bridges. After listening to me, General Moskalenko answered:

- Placing obstacles was managed by the representative of the staff/headquarters of front Colonel Petrov. He did this correctly. It is not possible to restore now road.

During the same day I returned to Valuyki. Together with Colonel A. A. Korshunov I went to the chief of staff of the southwestern Front General (now Marshal of the Soviet Union) I. Kh. Bagramyan. I

reported to him about the conversation with General K. S. Moskalenko.

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After listening to my reasons about the inexpediency of the restoration of Kupyansk junction, Ivan Khristoforovich said:

- Rolling stock from the sector of Kupyansk-Svatovo nevertheless must be removed! How to do this, think yourself.

Colonel A. A. Korshunov made a decision to urgently construct branch from the station Rubezhnoe to the side track Ogorodnyi. This branch connected directions Kupyansk-Rubezhnoye and Valuyki - Kondrashevskaya and gave the output to the backed up trains.

The branch of the unit of the 1st guards railroad brigade and 29th individual railroad brigade was built. When construction already was completed, Germans broke through our defense in Lisichansk area. It was necessary to end construction, to take up defense and to place obstacles in the recently constructed sectors. To remove completely equipment from the area of Izyum and Balakleya did not succeed.

I already spoke about the severe tests, which fell in the share of the 19th brigade. The units of the brigade dismantled the

alternate tracks on the line Valuyki-Liski (now Georgiu-Dezh), when Germans, after bursting through from the direction of Staryi Oskol, took Alekseevka station, cut railroad, after breaking up thereby the brigade. Exit from Valuek to the east proved to be closed. Units immediately began to place obstacles. First of all the bridges were exploded. After them into the rivers the steam locomotives and cars with the rails fell.

Obstacles in the sector of Valuyki-Alekseyevka-Liski placed the detachment of demolition men under the command element of junior military technician Yu. V. Galkin, formed by the commander of the 31st path battalion of the 19th brigade Major B. M. Vasil'yev. When Hitlerites occupied Alekseyevka and Ostrogozhsk, withdrawal/departure to demolition men for Don was cut. Miners by this time yet did not have time to destroy all objectives, indicated by commander. One of such objectives was the bridge at Mandrovo station. On the stage at bridge the deserted cars with the armament stood. How to deal with them? To blow them up? But to this already there is no time. Galkin decided after blowing up the bridge to throw cars into the river. So they did. On the blown up bridge about 100 cars with different cargo tumbled down. During the fall the steam locomotive exploded. In air the clouds of water and vapor flew up.

- It is effective ! - said Galkin. - Let fascists try to figure

out this mess.

The brave men placed obstacles to the last possibility, after moving from the Mandrovo station to Platovka and Biryuch. On third night they moved out to the Khlevishche station.

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In the sky the flares continously flew up. German speech is audible. During the night we placed on the tracks of 20 mines of delay action and decided to reach our battalion. Later we learned, that on these mines two German trains were blown up. By the long route/path through Kantemirovka, Millerovo, and Morozovskaya moved out our travellers from the encirclement.

At the end of June to lead us arrived General N. A. Prosvirov from Moscow. During the day of his arrival I was called by the member of the military council of front brigade commissar to Aleksey Illarionovich. To meet Aleksey Illarionovich I went together with Prosvirov. Kirichenko was interested in the question of the evacuation of rails, so sharply necessary in the east of the country. But railroad brigades dealt with the organization of obstacles and to gladden the member of the military council I had nothing. I reported about a quantity of sent by us cars with the rails and armament, the

dismantled sugar refineries of Shchebekinskiy, Tavolzhanskiy and Kolodezyanskiy.

At this time the fate of the Liskin bridges across the Don greatly disturbed me. There were two - to Likhaya and Valuyki. The bridges are large, are two-way. To destroy them was to point of tears pitiful, but they also cannot be left whole. Hitlerites would obtain "green street" (boulevard) to the east. I reported to A. I. Kirichenko, that I gave instruction to the commander of the 19th brigade to mine bridges. But who will give instruction to blow them up?

After listening me, Aleksey Illarionovich removed/took hand receiver and asked for the chief of staff of front. After short conversation with General Bagramyan he said to me:

- The Liskinskiy bridges must be destroyed ! But only if Germans will appear on right coast of Don.

Thus order for the destruction was obtained, the moment of explosion they must determine themselves depending on the combat situation. It is necessary to perform. I called the commander of the 52nd reducing-transportation battalion of the 27th brigade Major N. S. Kruten and ordered him to immediately direct to Liski demolition

men with the explosive for the destruction of bridges.

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Demolition men must be at the disposal of the commander of the 55th operational company captain M. T. Vanchurov.

To direct explosion arrived V. V. Polotev. The group of the demolition men of the 55th company suspended charges, was installed wiring of explosive electric system. Captain M. T. Vanchurov was positioned on his observation post ~~in~~ 200-300 meters from the bridges. Miners awaited signal. And German motorcyclists appeared on opposite side of river. It is clear - reconnaissance. Tanks now will appear. Polotev gave signal for explosion. Land shuddered from the terrible burst. The trusses of bridge collapsed into the water. Within several hours into this area approached the units of the 6th army. They began to dig in. The General Headquarters of the Supreme Command advanced armies of combined arms to the line of Don river from reserve of the 6th, 60th, 63rd from Zadonsk (north of Voronezh) and to Kletskaya (in the environs of Stalingrad). The offensive of enemy was stopped.

The front line in Lisok area was stabilized. During these days in Liski arrived the member of the military council of the 6th army,

corps commissar L. Z. Mekhlis. We knew the stern disposition of this person. He permitted no objections. Therefore each tried to keep as far from him as possible.

Upon inspecting positions, Mekhlis saw the destroyed Liski bridges, was agitated. He called Colonel Tkacheva and darkly did ask:

- For what did you destroy bridges, if Germans stopped on the right bank of the Don?

Tkachev quietly answered:

The reason that the Germans stopped on right bank, was because we before their noses exploded bridges.

Mekhlis nothing said, by the stroke of hand dismissed Tkachev and to no one else asked this question.

In the middle of July the striking force of Hitlerites moved out into the large curve of Don. The danger of the penetration of enemy to Volga arose. Taking into account this, the general headquarters on 12 July, 1942, disbanded the southwestern Front and created Stalingrad Front, our 5th, 13th, 19th and 27th brigades began to serve Voronezh and Stalingrad fronts. I was appointed as the

commander of the railroad troops of these fronts.

The 27th railroad brigade, intensified by 16th reserve railroad regiment of Major I. P. Ovcharenko, covered all directions of Stalingrad unit.

end section.

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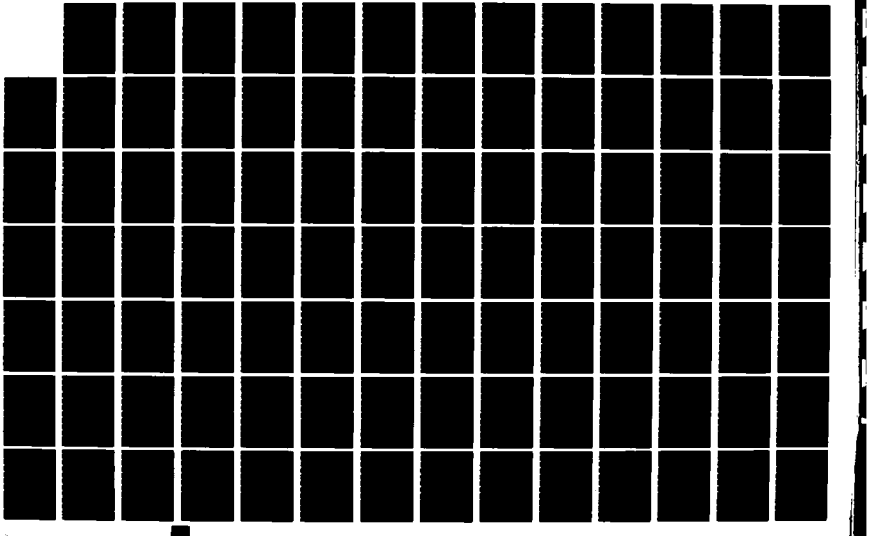
In the Likhaya - Stalingrad region was the large railroad bridge over the Don on the Lozhki sidetrack. Its length was 750 meters, it consisted of 11 spans. The sappers ~~engineers~~ of the 62nd army adapted bridge for the passage of motor-and-animal transport. After the withdrawal~~/departure~~ of the units of the 62nd army the bridge had to be exploded. This was the sole surviving bridge ~~transition~~ on entire middle flow of Don. Therefore its fate agitated both us and the Germans. We intended to annihiiate bridge, Germans - to preserve it. About this testified the fact that the fascists did not bomb it once, or fire on it. Above the bridge Fascist reconnaissance aircraft daily was on duty. Obviously, enemy wanted to take bridge by the surprise strike of its mechanized troops.

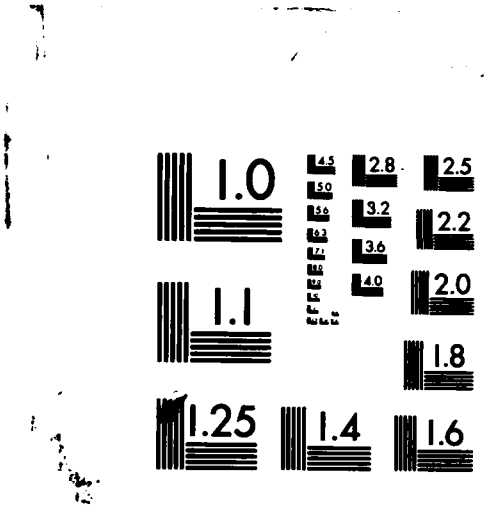
The 52nd track batallion, commanded by Major N. S. Kruten', was given the task of preparing the bridge for the explosion by the commmander of the 27th brigade.

For the defense of Lozhki bridge from the German tanks we for the first time decided to use the so-called guided minefield.

AD-A138 472 STEEL SPANS(U) FOREIGN TECHNOLOGY DIV WRIGHT-PATTERSON AFB OH P A KABANOV 31 JAN 84 FTD-ID(RS)T-0527-83 4/8

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

The area of the Lozhki bridge was defended by the subunits of the 112th rifle division. The forward edge of division passed along the right shore of Don. On the right bank the floodplain of river was intersected by high earth mound - approach to the bridge. In this mound there was installed guided antitank mine field. To prepare bridge for destruction Major Kruten' was aided by the division head of barriers of our directorate - the military engineer of 2nd rank V. S. Onufrieyev. They focused considerable attention in order not to allow the random explosion of charges from the falling of aircraft bombs, artillery shells or from the thunderstorm discharges of lightning. On the bridge the platoon of demolition men continuously was on duty. On 8 August the 112th division fell back from the right shore to the left. The soldiers of latter company had only crossed over the bridge, when on the crest of mound German tanks appeared. Onufrieyev counted - 24. Tanks fired over bridge from the guns and the machine guns. Several demolition men were killed and wounded. Tanks were moved up to the bridge. Here awaited them surprise prepared by our miners. As soon as three first armored hulks broke through the bridge-head mound, there was begun guided minefield. Explosion ! Tanks died on the spot. The vehicles rushing after them were turned back.

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At this time the second powerful burst shook vicinity. Lozhki bridge collapsed into the river.

The situation in the large curve of Don continued to be complicated. Hitlerites persistently broke through to Volga. German aviation bombed all railroad sections, leading to Stalingrad. From 22 to 31 July in the Povorino - Stalingrad sector were committed 58 raids. On to the Archeda section alone Germans completed 195 sorties and dropped 1138 bombs. Bomb strikes were carried out on the stations Filonovo, Serebryakov, Archeda, Ilovlya, Kachalino. Soldier-railroad workers showed great courage with the rescue of the burning trains with different equipment.

So soldiers and commanders of the 2nd company of the 84th track battalion saved from the fire~~/light~~ in the station Kachalino 200 loaded cars, food and clothing and equipment depots. Captain K. I. Yermishkin commanded company. Especially distinguished were Red Army men of company of candidates for VKP(b) V. A. Pechenev and the Komsomol member A. A. Cheppe. When they unhooked fuel train, tank with the gasoline flared up. Pechenev without considering rushed up and opened hatch. Explosion was avoided. They rapidly disengaged tank. Machinist brought up steam locomotive, he took the nose section

of the train on a hook, dragged it onto the stage. Switchman hid from the bombing into the slot and did not transfer outlet switch to main track. To the signal of machinist Cheppe came running, and, without turning attention to the explosions~~/bursts~~ of aircraft bombs, transferred switch. 50 Tanks with the fuel were so rescued.

German aircraft caused large harm to front railroads. Great effort was required for their technical cover. To the aid to us on the order of the commander/chief of GUVVR began to arrive the railroad troops~~/forces~~ and the special-formations of NKPS from other fronts. On 14 August, 1942, from the Kalinin Front to Stalingrad area arrived echelons with the units of the 15th railroad brigade. Colonel V. V. Bezvesel'nyy commanded it. They placed this brigade on the technical cover of Urbakh-Astrakhan' line.

In second half of August and first half of September the bitter battles on the nearest routes of approach to the city developed.

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On 23 August Germans broke through to Volga in Yerzovka - Rynok area, after cutting off 62nd army from main forces of front. Stalingrad railroad junction lost its transport value. The 84th battalion which served it began to fight as rifle unit. Major P. M.

Sheyin commanded battalion. The former commander, captain N. D. Zhandarov, had perished with the bombing on 28 June, 1942.

There are the sectors occupied by brigades during August. The 13th was assigned to the technical cover of Povorino - Ilovlya line; 27th: Balashov - Kamyshin - Ilovlya - Stalingrad; the 19th: Liski - Talovaya - Povorino, including the sector Liski - Otrozhka; the 5th: Voronezh unit and the Gruazi - Povorino line. The defense of Povorino unit and adjacent to it drivings on the part of Balashov and Stalingrad was assigned to advance repair train No 7. Experienced builder I. V. Timofeyev, V. I. Ogarkov, chief engineer, led it.

Through the Povorino unit basic cargoes for the Stalingrad Front went. To this railroad the enemy brought down entire force of impact of his aviation. Hitlerites disregarded not one station, not one train. But this line was one-track, with little track development of stations. However, the load on it was colossal. Trains went one after another in caravans, with minimum intervals. In order to ensure the rapid and safe sequence of trains, railroad workers used live interlocking. People arranged themselves in chain along the right side of skirt of side bed. Each was a signal post. Interval between the posts - kilometer. Signalmen were provided with telephone communication. Live interlocking several times increased the capacity of line. And all this occurred under the fierce bombings of hostile

aviation.

In the Urbakh - Dzhanybek sector, on which mainly fuel went, the subunits of the 18th battalion of the mechanization of the 15th railroad brigade organized the escort trains. Battalion commander Lieutenant Colonel A. M. Avdokhin was the initiator of this affair. The headquarters of battalion was placed in the center of sector, at Gmelina station. Commander divided sector into three units. He assigned to each unit a definite subunit. In parallel to railroad, at a distance of 300-350 meters, dirt road passed.

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Along this road on the automobiles together with the trains followed mobile restoration detachments. Each detachment had the necessary array of track tools, spares for the rolling stock and improvised material: clay, wooden plugs, rags. In the case of the raid of the hostile aviation detachments immediately took up the rescue of cargoes and the fastest restoration of movement on the stages. Soldiers extinguished the burning tanks, filled holes by plugs, covered over with clay. Only during October 1942 detachments in the Urbakh - Baskunchak railroad sector saved from fire 561 tanks with the fuel, 102 armed cars, 413 cars with the rations, there were many other cargoes and 29 steam locomotives. Considerably was shortened

the time of interruptions and the movement of trains. Soviet transport delivered all necessary for the rout of enemy to Stalingrad. There was, it seems, no means of transportation, which did not participate in this great affair. But the basic burden of transportation fell to the lot of railroads.

During these days on the Moscow unit and in the Vologda progressive-minded railroad workers organized the supply of military march routes on several sectors without the replacement of steam locomotives. New method was called "round trip". Steam locomotives were filled by water from the special tanks, which were connected to the tender. Commanders of Ryazano-Ural and southeastern railroads V. S. Levchenko and A. P. Molchanov used the innovation on their main lines. Together with military transport team they organized the circular movement of trains along the march route: Povorino - Archeda - Ilovlya - Petrov val - Balashov.

Roads leading to Stalingrad were reconstructed. Stations were reinforced, new blockposts, lines and bypasses around the units were built. On the instruction of the commander of GUVVR of the brigade of our front they deployed the construction of the junction Ertil' - Anna - Talovaya. With the construction of this track we obtained supplementary route from Grafskaya to Anna, Talovaya and further to Povorino and Kalach. Anna - Ertil' rail track created the circular

route of Gryazi - Grafskaya - Gryazi. The ring was to increase the maneuverability of the armies fighting in the environs of Stalingrad, increase the capacity of main route. Unfortunately, this tracer we to construct did not have time, but we made operational new main line Petrov Val - Ilovlya. It considerably increased road capacity, leading to Stalingrad.

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On the lines, which served the defenders of Stalingrad, several brigades of different fronts performed. For the coordination of their work the national commissar of lines of communication A. V. Khrulev sent on a mission General N. A. Prosvirin.

I met with Nikon Andreyevich in Povorino. I reported to him about the condition of affairs. Prosvirov, dissatisified, looked to me:.

- You did see, how the commander of the thirteenth brigade did organize the technical cover of sector Povorino - Stalingrad?

- Yes, I did see, but what did you not like?

- Soldiers live far from the stations, spend much time on the

marches, they are late with the elimination of rubble.

- Come on, comrade General, let us go to the thirteenth, we will see for ourselves on the spot !

Nikon Andreyevich accepted my proposition. Motor vehicles ran along ground toward Filonovo. The trails of bombings are everywhere visible. Under rubble the mangled cars and the broken equipment lay.

Fascist aircraft far above the invisible settlement beyond the hills soared. Carrion vultures in turn, with the heart-rending roar dived down, were audible bomb bursts, knocks of ack-ack guns. Chauffeur Mikhail Korchagin stopped vehicle.

- They are tearing Filonovo to pieces, the reptiles! There no living place remains, but they bomb it several times a day.

When Fascist aircraft flew away, we drove up to the blazing station. Wooden panelling of cars cracked in the fire, ammunition exploded. The pitted by bombs tracks still gave off powder stink. Surprisingly to Nikon Andreyevich, in the fire and smoke already worked the soldiers of the 13th brigade. He looked at his watch:.

- Six minutes, since the fascists flew away. Battalion on the

spot. Fine people!

Obviously, General Prosvirov had been incorrectly informed by someone. Brigade commander Colonel V. S. Petrov approached. He reported to General Prosvirov, and he attentively observed how, soldiers and commanders damped the burning cars, unhooked them, and drove them out to the stages. They worked precisely, according to the previously developed plan. Some unhooked cars, others extinguished fire, others overhauled tracks.

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Together with the soldiers local railroad workers worked. From under the car the soiled in the carbon black, scratched commander of station emerged. He appeared before us. His voice seemed to me familiar. I scrutinized him - A. I. Bogdanov, former commander/chief of Stryrskiy squad. N. A. Prosvirov asked him:.

- How long do you need to overcome the aftereffects of bombings?

- At the most no more than two or three hours.

They went further. At each station, where at the moment of our arrival there was no bombing, we alerted subunits. Subunits

fulfilled well all orientations, and N. A. Prosvirov barely made admonitions. About evening they drove up to Archeda station. By the sides of main track - the heap of the broken rolling stock. A real cemetery. The trains go on the sole track as if through the gorge. Are unloaded trains at the approaches to the station directly onto motor vehicles, which deliver all necessities to the positions. Looked Prosvirov at this cemetery and angry asked me:.

- Why did they allow this accumulation of trainsat the small station?

I explained that movers and military transfer troops did not immediately think of bringing the train through the station on the move and unloading them on the stages. They understood this only after fascists annihilated much rolling stock. They laid alternate track on the street of station settlement. Now Archeda works on the passage as stages.

Povorino - Archeda - Stalingrad sector together with the 13th brigade was covered by advance repair train No 7. Thus far we went from Archeda to Stalingrad, the line several times was attacked by German aircraft. In the headquarters of our UVVR they kept account of a number of bombings of each station and quantity of dropped bombs. After the completion of battle in Volga they totaled. To Archeda

station were only committed 70 air raids and more than 5 thousand bombs are discarded. In the sectors of the southeastern track, which adjoined Stalingrad, the Germans made 17673 missions and dropped 53958 bombs.

Vehicles enterd into Stalingrad. On the streets there were many children, whom the educators organizationally conducted to the crossings over Volga. The children's institutions of the Ukraine, which jammed in Stalingrad, were evacuated.

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Ferries, motor boats, boats continously transported children to the eastern shore of Volga. On the crossing worked our 16th educational railroad regiment.

At agency for control of Stalingrad track the deputy commander of the control of the railroad troops General M. A. Maximov, met us. He recently arrived from Kotelnikov station. Matvei Andreyevich knew that Kotelnikovo - was the native land of Prosvirov; therefore reported to him with all details.

- Rifle units retreated. Our track batallions had to defend station. ~~track~~ I remained as garrison commander.

General M. A. Maximov organized not only the defense of station, but also the evacuation of rolling stock, and technical cover. Under evening Fascist aircraft flew. One of the bombs pleased into the armed car. It ignited. They only extinguished car, tank flared up on the adjacent track and here it exploded. Above the station the giant column of fire rose. When flame a little ceased, soldiers and commanders started to remove the surviving cars from the station. It was possible to save a large part of the cargoes. The burning cars, which could not be extinguished, were moved out onto the stages. They placed steam locomotive at the end of them and accelerated cars under the gradient to the adjacent Semichnaya station occupied by Germans.

Running forward, I must say that by second half of August the fascists still little bombed the residential sections of Stalingrad. On the other hand the railroad junction, where a large quantity of trains were stored was hit heavily. One raid after another. Railroad workers did not manage to unload trains and to damp the burning cars, or to repair the damaged tracks.

Based on the example of the work of Stalingrad junction in the days as in the focus, were reflected almost all difficulties of the work of the front railroads of the country. For strengthening of the

S. I. Bagayev was experienced organizer. An operater, an expert on railroad specifics, he made enormous work on the adjustment of military transportation.

The outstanding specialists of river navigation Z. M. Shashkov and S. M. Bayev started the organization of the transportation of cargoes on Volga and the adjustment of work on the crossings. The heroic efforts of railroad workers, river transport workers and motorists made it possible to carry out, it seemed, impracticable mission. Within two-three weeks the population and hospitals were evacuated from the city, equipment of many plants was loaded and sent to the rear.

We evaluated the importance of the ~~made~~ work only in second half of August, when Germans began the mass bombings of city.

During those difficult days I learned pleasant news. On 5 August obtained telegraph message from the NKPS to the name of the Major General of the technical troops Kabanov. I telephoned the people's commissariat, assuming that an error occurred. From Moscow they answered, that there is no error. So I learned about the conferment to me of general rank. I will say frankly, this report me gladdened

and encouraged. I vowed to justify the faith that the party and government had shown in me.

After capture by the fascists of Donbass the railroads of the center of the European part of the country were deprived of their coal base. It was necessary to deliver fuel from the Kuznetsk, Karaganda and Kizel basins. The direction of the flows of oil also dragged. Fascists cut the railroads to the North Caucasus.

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Hung the threat above our oil-bearing areas: Groznyy, Maykov, Baku. Oil from Baku and Groznyy it was necessary to deliver through Caspian Sea to Krasnovodsk, and then over the Ashkhabad and Tashkent roads to the central areas of the country. In order to accelerate the delivery of oil from the North Caucasus, it was planned during August 1942 to introduce into operation the Kizlyar - Astrakhan line. For the fastest completion of the construction of this line GUVVR 47th sent the railroad brigade of Colonel V. M. Golynin. The transmission of fuel oil trains from the Kizlyar line to the Astrakhan - Akhtuba main line must be conducted through Volga with the aid of the ferry crossing. This crossing in haste built the 30th bridge battalion, which Major N. A. Perov, and 2nd bridge restoring detachment of Major I. Yu. Barenboym commanded. These units were aided by the bridge

companies of the 5th and 29th bridge battalions. It was necessary to work under the continuous effect of hostile aviation. Life conditions are difficult. Materials and water were not sufficient, to construct mud huts. People slept under the open sky in the steppe. But climate severe; it is in the daytime hot, is at night cold.

To direct all this construction and to organize the transportation of oil Soviet government conferred title of deputy of Peoples Commissar of lines of communication on I. D. Gotseridze. I. D. Gotseridze's headquarters was moved to Astrakhan.

On the construction of the ferry crossing over Volga Major Nikolai Alexandrovich Peroch somewhat more lately described to me. Initially over Volga in Astrakhan it was planned to construct large railroad bridge with the high capacity. Construction has already been begun, when situation at the front sharply deteriorated. Germans approached Volga, they took Rostov. There was no time for the construction of fundamental installation. Moreover, the plants, which supply construction of metal structures, proved to be in the rear of enemy. The erection of large bridge it was necessary to refuse. They began to search for another, more rapid resolution of this problem. They designed floating bridge. For its guidance the barges are necessary. The commander of the 47th railroad brigade Colonel V. M. Golynin, together with the executives of Volga river steam navigation,

organized the searches for barges. From Astrakhan to Saratov the scouts inspected all creeks, piers, sites of loading and unloading.

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Near Uveka they found railroad ferry. They took it down the flow of river to Astrakhan. They placed on the crossing. But the capacity of ferry is limited. It was necessary to divide each fuel (tanker) train into several units. Ferry worked with the enormous effort, and transportation increased. At Trusov station many trains were stored. German aircraft continuously bombed and fired on tanks. Continually above the steppe flashed giant flames. Special groups hardly managed to damp tanks, to fill holes, to restore tracks.

Again they undertook the creation of the floating bridge, which would help to unload ferry. The deputy commander of engineering office of the 47th railroad brigade, Engineer Major Ya. A. Vilenkin developed project. Brigade commander charged the construction of bridge to the 30th bridge battalion.

On the project are necessary metallic barges of the type "Ordzhonikidze". Again searches/~~scannings~~ on entire Volga. They finally found 8 barges. But to cover of river channel by ordinary methods this quantity of barges is insufficient. But there are no

more barges. What is to be done? Vilenkin proposed the daring solution: to place barges not as is usual (across the longitudinal axis of bridge), but in a stern column (along the axis), one barge following another. Then they were sufficient. This method in the engineering practice was applied very rarely, and in our country it was used for the first time. Certainly, this project held a definite element of risk. Bridge was placed immediately on the place, without the experiment and laboratory investigations. There was no time for this. Gotseridze affirmed project. Builders deployed work on wide front. On both shores of river the piers were raised, drove in piles. The pile driver groups of the Lieutenants Salitskiy, V. A. Rosnin and the military technician of 1st rank V. D. Mchedlishvili drove per shift instead of 10 piles according to the norm - 30-40 piles. Each barge was towed separately. Soldiers made transient bridges between the barges, and installed water - evacuating mechanisms. Barges were attached to anchors, connected by cables. 10 Days after the beginning of construction Ilya Davydovich Gotseridze cut traditional ruby-colored band and opened the floating bridge to the movement of trains.

An EU steam locomotive first went over the bridge with a speed of 10-12 kilometers an hour with several tanks. This was the maximum permissible speed.

The capacity of crossing was immediately increased several times. The country and the army began to obtain more fuel.

But character in floating bridge proved to be capricious. It was necessary thoroughly to follow a precise observance of the straightness of axis in the plan and in the profile. Flow carried away barges, water level constantly changed. The "pranks" of nature had to be removed or softened. Under any conditions rail track must rest solidly, exactly and directly.

Special water - evacuation groups 24-hours were on duty at the pumps, maintaining barges at the certain level. Depending on the conduct of the river of groups regulated the draught of barges. Water served as ballast. It first first added, then evacuated.

Engineers developed technical operation instructions for crossing. To the machinists of steam locomotives it was categorically forbidden to exceed allowable speed, to brake train on the bridge, to give counter-steam. In spite of the rigid fastening of barges and the strict observance of all estimated norms, the axis of bridge bent, like a sail in the wind. In all cases this curvature must not exceed the certain commercial standards so that the rolling stock could fit

into the curve. German aircraft frequently bombed crossing. Repeatedly it came under the fire, and soldiers, defying death, rescued installation. Courageous people built crossing and maintained it in próper working order. Many of them were awarded high government decorations. The Order of the Red Banner decorated the breast of the commander Major N. A. Perov.

Difficult was the way of fuel (tanker) trains even after the crossing on the left shore of Volga, from Astrakhan to Urbakh. Length of this main line was approximately 600 kilometers. Its vital activity provided three railroad brigades: 15th, 46th and 47th. Crossing and head sector from Astrakhan to Dosang covered the 47th brigade, which finished the construction of Kizlyar - Astrakhan line. Colonel V. V. Turiyskiy commanded it already. Sector from Dosang to Urbakh was covered by the 15th and 45th railroad brigades. They were commanded by Colonels V. V. Bezvesil'nyy and A. D. Shishkin. These brigades within the time of combat in the environs of Stalingrad did enormous work. Speaking in general terms, they altered entire main line, which became unrecognizable.

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Tracks at almost at all stations were lengthened, were constructed many new sidetracks, lines and bypasses around critical stations,

were replaced dangerous rails with healthy ones. They increased ties. They made filling of ballast. As a result of the work done the capacity of main line from Urbakh to Astrakhan increased from 9 to 24 pairs of trains in a 24 hour period. Enemy did not stint on bombs in order to render inoperable this strategically important line. German aviation bombed not only stations, but also individual trains, going to the front, especially tankers. But in spite of the bitter bombings, main line performed.

Several subunits of these brigades on the order of the military council of Stalingrad Front were moved from the left shore of Volga to the right. There they covered stations Red Army and Sarepta. Over the burned out, ploughed by shells ground passed railroad tracks. Only black bare hill separated Sarepta from the avant-garde. And through this hill several times under the mortar and gun fire approached almost to the very trenches on his steam locomotive the young machinist of the column of special reserve NKPS Sasha Rozhkov. Still from a distance the soldiers of the 64th army noted the approaching skam of Sasha's locomotive.

- Look, Stalingrad lives! - they shouted. - Death to fascists!

The appearance of the train lifted the fighting spirit of Red Army men. They were assured that they will be provided with

ammunition, be fed in time, and, if necessary, aid will arrive in time.

But let us return to our journey through the railroad units of the front.

We traveled from Stalingrad to Povorino through Ilovlya. At each stopping point the combat readiness of groups was checked. 34 kilometers from Gumrak is located the Pan'shino sidetrack. Three tracks. On one of them the open freight cars with the grain stood. With perplexity I ask assistant stationmaster:.

- Why do you not send it off?

- Kotluban' does not accept.

N. A. Prosvirov, stingy with jokes, said:

- They are waiting till the Germans see grain !

He had just pronounced these words, as in the sky the increasing hum of Fascist aircraft was heard. I shouted:.

- Lie down!

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They fell, where they stood. I proved to be near the large road puddle. Overhead the bombs began to squeal. Poured suffocating powder fumes. Was strewed by the ground. Aircraft just as suddenly as they had appeared, so also they suddenly dissappeared. I arose. I look: next on to meadow lies my adjutant Lieutenant G. I. Afonchenko. He clutches leg by hand, from under his fingers the blood oozes.

- What with you, Afonchenko?

- Scratched, bad, he answers. - Seems, the bone hit. I can't stand it.

V. S. Petrov reached from his pocket medical package, tied up for Lieutenant wound. Nikon Andreyevich and chauffeur draw water in the puddle, is quenched the smoking vehicle. Near the vehicle rests pierced by bomb splinter my trunk. I opened it. Fragment opened the cover of my saftey razor.

Suddenly someone next yelled:.

- Grain burns !

To the smoking cars the soldiers already ran. To me the platoon commander ran up, he threw up hand to the overseas cap:.

- Lieutenant Kravchenko ....

I ordered:.

- Fast rescue grain !

Soldiers already surrounded cars ....

After sending Lieutenant Afonchenko to the hospital, we went further. To the side ran Ilovlya, Archeda. On the hill Serebryakov station appeared. Next to the station two bridges across the Medveditsa river: railroad and motor-and-animal. We had just passed over the motor-and-animal bridge, I look, near the rail track the group of miners sits. They have dinner. Two quietly sit on some strange object. But on what do they sit? I ask chauffeur to stop vehicle. I approach the Red Army men. And there it is - they sit on an unexploded thousand-kilogram German bomb!

Young Lieutenant jumped, he reports:

- Platoon commander Lieutenant Kiselev ....

I approached the miners:.

- Comrades, your life is necessary to the native land, the family, and you are obligated to take care of it from any chances! But what are you doing?

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Elderly bearded soldier quietly answered:.

- If bomb is meant for me, then although I bury from it in the ground, nevertheless it will find me. But if no, then sit on it - it will not touch.

Him another elderly soldier supported:.

- I am tired, comrade General, of being afraid.

I was angered:.

- Precaution at the front is necessary to all! An hour of caution - a year you will live. If you will live a year - you will save your life !

But I feel, my words do not reach the Red Army men. Then I strictly told off the Lieutenant for the nonobservance of safety engineering. He assured that nothing more similar will be repeated. When we went further, Nikon Andreyevich smiled:.

- Grew bolder our people.

Povorino met us with sad news. From Balashov into Povorino the armed train went. On the Baychurovo - Makashevka stage arrived a flight of German aircraft. Bombs fell into the steam locomotive and into the armed cars. Fire encompassed train, shells began to explode. At this time on the adjacent track the train with the replenishment went. Machinist wanted to get over dangerous zone, but was damaged steam locomotive by explosion. Train stopped. People fell under a hail of fragments of the exploded shells. At the place of the catastrophe arrived first the civil engineers of the column of foreman Revchuk of advance repair train No 7. Risking life, the advance repair train people took out of the burning cars casualties, they gave them first aid. From Balashov and Povorino came repair trains. I dispatched to railroad workers two battalions of the 13th

brigade. Losing not a minute, we together with Prosvirov went out onto the stage.

Several hours continued fight. To me it is difficult to now name those being outstanding. All, who were there, and who remained alive were distinguished. From the depot the steam locomotives approached. They pulled undamaged cars in different directions. With the aid of the tractors and the cranes they cleared track. Soldiers replaced the damaged rails and ties and restored the movement of trains. When the first train proceeded, I looked at my watch. Had passed 12 hours from the moment/factor of catastrophe. This was one of the largest interruptions in the movement of trains in the sections of our UVVR.

With each day resistance of the defenders of fortress in Volga increased. Enemy raged.

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Where as during September on the railroads of Stalingrad Front German aircraft made 316 aircraft-raids and dropped 2308 bombs, during October Hitler carrion vultures attacked 1026 times and dropped 3232 bombs. To the Urbakh - upper Baskunchak railroad line were dropped 2870 bombs, in the sector upper Baskunchak - Astrakhan - 2519 bombs.

On the railroad junction Baskunchak the fascists dropped 1374 bombs. According to far not complete data, in the sectors, which adjoin Stalingrad, Fascist aviation made about 18 thousand aircraft-raids, after dropping more than 53 thousand bombs. But no bombings could break the will of soldier-railroad workers. They rapidly removed the after effects of raids and delivered all necessary to front.

The enormous work, done by railroad workers in the period of Stalingrad battle, is vividly shown by the following numerals. From July 1942 through 1 January, 1943, into Stalingrad area were delivered 3269 trains with the troops and 1052 trains with the ammunition, armament, fuel, rations, drugs and other material-technical resources, 202877 cars in all.

Internal rearrangement in autumn in the structure of our control occurred. The posts of the commander of UVVR and the commander of the railroad troops were united. Unity in the command element by railroad brigades was established by this.

Me they assigned commander of UVVR-3, which serviced Voronezh Front. Colonel B. I. Pavlov became commander of UVVR-8 of Stalingrad Front. The railroad troops of Voronezh Front covered the sectors Liski - Povorino, Gryazi - Povorino, Povorino - Balashov, Povorino - Stalingrad, Balashov - Kamyshin, Kamyshin - Ilovlya. These lines were

merged at the position of our troops or went parallel to them. Maintaining the survivability of each kilometer of the front railroad track was our primary task.

Then we also thought about the future offensive of the Red Army. So, in the direction, served by the 19th brigade, near Liski station, as I already spoke, were two bridges over Don.

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Two-lane bridge to Rossosh' we had destroyed completely. On the two-lane bridge toward Valuyek some span ~~buildings~~ structures survived, stood unharmed the supports. The soldiers of brigade did everything in order not to allow enemy to finally destroy this bridge. I was near soldiers and commanders of the 9th battalion, who covered Liski bridges, together with the commander Major I. V. Sytnik. They visited the mud hut of miners. The chief of service of barriers of battalion, the young, merry Lieutenant Alesha Bochek described that the Germans frequently drop on the station Liski time bombs. The designs of fuses are quite varied, frequently with listening posts. Senior Sergeant S. I. Komarov, Sergeant P. K. Il'ichev and other miners skillfully guessed the listening posts of enemy.

To me greatly caught the fancy for cleverness, keenness, courage

these kids. Blue-eyed Serezha Komarov did ask me:

- Really, comrade General, we will again place bridges and on them will pass our trains? It doesn't seem possible ! It sometimes seems that the war will continue for long, for long and never will end.

- We already work out the project of the restoration of these structures, I answered. - Wait a while, will go over them our trains. They will certainly go!

- Good!

Commander mentioned:.

- Preparation for the restoration occurs full speed. The fourteenth bridge battalion in the scaffolding near Khrenovaya station prepares piles and frames!

Actually, we had even then begun preparation for the restoration of Liski bridges and sectors of road. From the archives of the railroad administration we received the necessary documentation, according to which the engineers calculated, how much different materials, finished structures, equipment, and armament, transport

means of delivery would be required. We composed the designs of the restoration of large bridges in several versions. This was our first experiment on the development of long-range plan. Certainly it was very difficult to assume, to what degree the enemy would destroy one or another structure, or ~~what section~~ which sector of track he would leave us with. Life later confirmed our basic assumptions, although it did not occur manage without errors.

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The plan we considered as basis for organizing the activity of railroad units in the course of future offensive. Therefore we tried to encompass all aspects of combat life in it. Brigadier generals according to our plan formed the permanent detachments of technical reconnaissance, provided them with transport, instrument, weaponry. The engineers of battalions prepared people on the special training ranges for the rapid methods of restoring artificial structures. Pile driver groups learned to rapidly drive in piles, carpenters - to bind wooden frames and units. Indeed our future basic problem was to lay track in the wake of attacking forces.

The designs of the restoration of Liski bridges developed the engineers for our control under the leadership of chief engineer for the control G. I. Zingorenko and engineer G. F. Ivolgin.

At the end of November our long-range plan became operational. On 19 November took the offensive the troops of the southwest and Don fronts. Next day they delivered powerful strike on fortifications of the Germans of the army of Stalingrad Front. On 23 November the mobile formations of the southwestern and Stalingrad fronts completed the encirclement of the German forces in Stalingrad area. The basic turning point in the course of the Great Patriotic War and entire Second World War was begun.

End section.

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IN THE STEPPES BETWEEN THE RIVERS.

Above Volga the guns still crashed, machine-gun and automatic shots were heard, and military railroad workers already cleared and demined stations and stages, were laid rail tracks in the liberated territory of Stalingrad unit. This was a difficult affair - restoration/reduction of railroad junction. Several months in its territory raged furious fighting. Subgrade is pitted to the base by craters from the bombs and the shells, by trenches, by the communications trenches, by dugouts.

A deficiency in the equipment very sharply was perceived. Almost everything was necessary to make by hand. Especially much effort and time were spent in the cleanup of tracks away from the burned down and broken rolling stock. The frameworks of the majority of steam locomotives and cars were so disfigured that it was necessary to cut them with autogen [autogenious welder] into parts in order to remove from the tracks. On the unit were located 14500 destroyed cars and steam locomotives. This was only on one Stalingrad junction alone!

I already related how we previously planned the restoration of Liski bridges. At the end of 1942 in the administration was completed long-range plan of primary restoration works in the zone of attack of front from Volga to Dnepr. They calculated, that the length of the destroyed main lines will be about 8 thousand kilometers. Then they determined the approximate degree of destruction of track, stations, manmade structures. Here we drew on experience of the offensive of the Red Army in the environs of Moscow. The first 50 kilometers of railroad lines enemy, as a rule, were destroyed completely.

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The next 100-120 kilometers - no more than half, and further - partially. Large and average bridges the Hitlerites annihilated. Knowing all this, our specialists calculated, how much will be required different materials. The obtained numerals were compared with the existing centralized funds. The requirement for the materials exceeded their presence by several times.

We directed these detachments in GUVVR, where compound long-range plan was developed. When all numerals were summed, it became clear that with the available forces and by materials the

railroad forces could not manage the forthcoming restoration works. Therefore GKO made a decision to bring the strength of railroad forces of the Red Army to 253 thousand people. Replenishments, soon into the brigades began to arrive. As the reader sees, for the new offensive combat we were prepared solidly, thoroughly considering its each future step.

Meanwhile the events at the front were developed with the lightning speed.

On 12 December fascists launched an attack from Kotelnikovo area on Stalingrad. They rushed to the help of their surrounded troops. Under the pressure of superior forces of Hitlerites the large formations of the 51st army had to withdraw. Face to face with the enemy unexpectedly proved to be the units of the 15th railroad brigade. It was necessary urgently to switch over from the restoration of track to its destruction. The 74th track battalion especially in the difficult situation proved to be. When explosions ended, the miners of battalion began to use shells and bombs. Fascists on the third day of offensive approached Aksay-Yesaulovskiy river and they crossed it. Military railroad workers with the soldiers of field units shoulder to shoulder and fought to the death. On the fifth day of the offensive of Germans the situation at the front sharply changed. On 16 December passed into the offensive the

troops of the southwestern and left wing of Voronezh fronts. By 24 December the Hitlerites stopped the offensive of the southwestern Front. But for this, the enemy had to throw all divisions intended for the penetration of the 330-thousandth grouping surrounded in the environs of Stalingrad into combat.

On 24 December took the offensive our troops in the Kotelnikovo direction. The attempt of the Hitlerites to rescue the divisions surrounded in the environs of Stalingrad suffered defeat.

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The line of external front passed to 120-160 kilometers from the ring. The Soviet troops freed the enormous territory, saturated by the dense network of railroads,. Liberated proved to be many stages of Stalingrad lines - Likhaya and Liski - Likhaya. For the restoration of these sectors were assigned 27th and the 13th the railroad brigades of Colonels Pavlov and Petrov. The sector Kantemirovka-Rossosh' was located in the zone of attack of the troops of the southwestern Front, but to restore it upon the command of the commander of GUVVR was our job. The commander of the 19th railroad brigade Colonel Tkachev sent the there reinforced company of the 9th track battalion, which the captain P. I. Pisarenko commanded. Mission was not easy. About this testified the report of the detachment of

technical reconnaissance, operating in the sector. The section head of technical reconnaisance of brigade captain K. I. Bergmann, experienced, resolute military engineer commanded detachment.

Into K. I. Bergmann's detachment entered the comrades B. P. Vasil'yev, I. S. Frolkin, L. I. Brodskiy and representatives of UVVR-3 L. Ya. Berkovskiy and A. A. Zemlyanitsyn.

When the troops of the southwestern Front took the offensive, I sent the detachment of technical reconnaissance into the area of the activity of the 4th armored corps. Scouts left in the cargo vehicle. Bergmann and Berkovskiy immediately established communications with the tankers. The motor vehicle of scouts moved in the combat formations of the corps.

Towards the end of day following the advancing tanks they enterd into Kantemirovka. The corps went forward, and our scouts remained at the liberated station. Losing not minute, detachment began technical reconnaissance of station and adjacent stages. Our troops were not in the city yet; therefore in the depots/dumps been cast off by Germans Berkovskiy provided protection. Under his management the local residents began the restoration of railroad.

In one of the quarters/premises of Kantemirovka station someone

of the scouts found original photograph in the German technical log. In the foreground stands English "Tommy". Helmet is moved over the forehead. He scratches back of his head with his hand and puzzled looks at the railway line. The rails far into distance are clearly visible. The adjoining ends have been blown up.

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The ties of in the middle track are elevated and cut in two by some powerful weapon. On the track a deep furrow is run. Under the photograph the label: "this is it !"

Scouts delivered log into the headquarters of the administration. Thus, during December 1942 we for the first time externally were introduced to the German track-wrecking machine "hook". At the Soviet-German front the Hitlerites began to use it in second half of 1943. For the successful execution of the target of command element the commanders and the soldiers of detachment were rewarded with orders and medals. These were the first decorations of our technical scouts.

Toward the aid of the detachment of technical reconnaissance we directed the company of captain P. I. Pisarenko. From Voronezh Kalach to Kantemirovka the railroad workers went on foot. Only tools and

mechanisms were moved on the motor vehicles. By the arrival of company the detachment of scouts had already deployed restoration works in the sector Mitrofanovka-Chetkovo. Its extent was approximately 100 kilometers. Bridges and pipes were destroyed. Switch settings on almost all blockposts were exploded. Water supply is disabled.

They decided to call on aid of as many local residents and railroad workers as possible. The deputy commander of battalion on the political unit, Major A. M. Polyakov, organized from the political workers and the communists the operations group, which began explanatory work in the surrounding stations. Soon hundreds of Soviet people arrived at track.

During these frosty days I frequently was in this sector. People worked in wind penetrating to the bones. Land was as iron, no remorse. But worked all, as the saying goes, without unbending, in the perspiration of face. Only sounded the command "smoke break"! I see: all are collected into one group, around the bearded old man. In the hands the old man has Saratov accordion with the bells. He began to play dance. From the crowd about him, ragged gypsy jumped out. Indicating the broken, tied up by cords boots, he shouted:

- "Tango" brand. Stitched to order !

Flapped in beat ice-covered soles, hands clapped and went into the dance. People were revived, they took up rhythm in clapping. As if there was no war and frost.

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I looked at my dear compatriots and thought: "This is it, the wide Russian soul"!

The offensive of the troops of the southwestern Front successfully was developed. The restoration of railroads in essence did not lag behind the rates of advance. During these days the situation was especially bad with the materials. Searches for rails, ties, attachments, finished bridge constructions became one of our primary tasks. True, in this question we leaned on the special resolution of GKO No 1095 of 3 January, 1942. In the resolution discussion centered on the need for the mobilization of all material reserves in the areas of the restoration of lines. Rear railroads were forced to pass all their reserves to restorers if necessary.

In the resolution it was indicated that all designated by government funds had to enter the front lines completely and in

proper time. For military railroad workers it was permitted in the civilian enterprises to overhaul their vehicles, mechanisms, tools. The railroad troops obtained right prepare in any area scaffolding, to use finished lumber, no matter the organization to which they belonged. Rights equal to ours were showed by the detachments of special-formations.

This resolution opened to us doors to the local resources. However, in places it was not possible to obtain metallic span structures, communications equipment, pumps, steam boilers and another equipment. We obtained this equipment only on the special allocations. Running ahead, I will say: nevertheless bulk of all materials consumed by us for restoration works we prepared ourselves. In all the years of war the railroad troops of the Red Army consumed 6.5 million tons of different materials and structures, of them 4.5 million were prepared on the spot.

Our troops continued offensive. Newer and newer sectors of railroads were freed, the requirement for the materials for their restoration increased. Were necessary special organizations, which would deal with the provision of the railroad troops with these materials. Such organizations were created on the resolution of GKO. In the brigades and UVVR were created the departments, in GRUVVR - administration.

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The administration was headed by experimental specialist-supply worker Ivan Vasilyevich Shchurov. After a time he was replaced by, a good organizer and great expert in his field, Aleksandr Vasilyevich Kondrashov (now the deputy minister of the construction of the enterprises of the heavy industry of the USSR). Experienced specialists manned the control apparatus. Among them there were such remarkable supply workers, as S. M. Mozgrin, B. A. Sheftel', S. Ya. Pantelei, A. N. Ryabinin, L. G. Lisnevskiy. The colleagues of the new administration introduced large contribution to the cause of the restoration of main railroad lines.

Meanwhile the catastrophe of the surrounded Hitler troops approached. On 10 January, 1943, the Soviet troops/forces began the assault on German fortifications. The armies of Voronezh Front from 13 to 27 January conducted the operation, which obtained the name of Ostrogozhsk-Rossosh'. In the course of this operation were routed 15 Fascist divisions, 6 divisions sustained large losses. The main line of Liski-Kantemirovka was completely purified of Germans.

Our administration the military council of Voronezh Front

assigned two primary tasks. First, to restore the bridge over Don at Liski station and, in the second place, to make operational the sectors of railroad from Liski to Valuyka and to Rossosh'. To the execution of these targets (as I already said) we were prepared in advance. To the reader it is known that during July 1942 the miners of the 19th brigade exploded Liski bridges. But during the explosion many important structures randomly survived. So in two-lane bridge on Valuyka remained intact many supports even 5 span structures out of 12. This made it possible to rapidly restore bridge and to open the movement of trains along it. Hitlerites excellently this understood and made great effort to explode the surviving structures.

Captain A. V. Borzov's company covered Liski bridges from the 14th bridge battalion of the 19th railroad brigade. Company took up defense of the embankment on the left shore of Don. All attempts of the Germans to undermine the surviving structures were repelled. The group of the Senior Sergeant N. K. Lezhin was once ambushed. At dawn the soldiers noted a group of German miners crawling to the bridge. After themselves the Hitlerites dragged explosives. Lezhin decided to allow fascists to approach closer and to annihilate them.

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When Hitlerites approached, upon command of Senior Sergeant the heavy

mounted machine gun of private first class Karaev hit. Caught by surprise, Germans swept on to ice. The Privates Shabunin, Bukov, Shul'nenko and Chernov bespattered fascists with grenades, and then rushed to the enemy hand to hand. Not one Hitlerite left. Thus was repelled the next attempt at the enemy to destroy the surviving structures of bridge. And the time arrived to rehabilitate the bridge. After several months for this glad day the 14th bridge battalion in the forest in Khrenov station began to procure for the bridge of frames, piles, beams and other wooden elements.

The command element of the 19th brigade previously verified the condition of inner bearings (bulls) and bank abutments of Liski bridge. First into reconnaissance went the soldiers of the 14th bridge battalion under the command of the military engineer of 3 ranks I. A. Bagrov. With them went military technician of 2 rank Yu. V. Galkin. Scouts, not noted by enemy, because of blizzard winter night, made it to the bridge, they inspected it and happily returned.

Soon army scouts reported to us that the fascists swarm under the abutments of bridge foundation areas and lay explosives. To verify the obtained information we assigned to military technician of 2nd rank Galkin. Together with him went the sergeants Aleshkevich and Veselyy, private first class Razumovskiy, Privates Petrash and Markov. Data of army intelligence were confirmed. There was no time

to impede the Hitlerites. In the morning fascists exploded the right-bank unit of the bridge.

Within several days the troops/forces of our front passed into the offensive and cleared the Liski area of the enemy. Before beginning the restoration of bridge, it was necessary to clear mines. Approaches to the bridge the fascists had literally stuffed with mines of different systems. And this entire filling - in several layers in the ice-covered of snow. "A layered pie" - called it our miners. Thousands of mines were extracted from this "pie".

As soon as I obtained communication about the release of Liski area, immediately together with the chief engineer of the administration, G. I. Zingorenko, I left for reconnaissance. On the shore of Don already awaited us the appointed as the construction commander of bridges, Colonel A. N. Tkachev, his deputy Colonel I. M. Shapovalov, the chief engineer of construction engineer major A. K. Sokolov.

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Preliminarily we decided to rehabilitate the bridge of Valuyka axis from the surviving span structures for one track. To raise the two-lane bridge of Rostov course there was neither forces nor time.

Here we intended to clear only the river bed of fragments for the passage of spring. With this detachment was developed the design of the restoration of bridge. It made it possible the passage of trains to Rostov and Valuyka. In order to again verify the correctness of the decision we had made, we all together inspected both bridge crossings, established degree and character of their damage. The left two-lane bridge of Rostov direction with the two-way span structures, a length of 158 linear meters was exploded completely. Span structures are destroyed and had fallen from the supports into the river bed. The right two-lane bridge of Valuyka direction was exploded partially. Of 12 multi-latticed span structures intact remained 5. Destroyed were two span structures in the sixth span, one - in the fifth, two each in the fourth and the third. Many intermediate supports survived.

After being introduced to the situation on the spot, G. I. Zingorenko introduced some changes in the initial design of the restoration of bridge. Simultaneously we developed a detailed plan of the organization of construction and diagram of its execution. They reported this document to the national commissar of lines of communication, A. V. Khrulev and to the military council of Voronezh Front. For the restoration of bridge they gave 20 days to us. Thus, on 17 January after finishing the mine clearing of bridge, we on the same day began its restoration.

Works were started on wide front. Several operations simultaneously were fulfilled, in the different sectors, with the envelopment of almost all basic structural members. In this case, of course, strictly was observed the sequence of operations. Some of the forces, for example, corrected the damaged supports. Soldiers dismantled the destroyed track and was levelled surface. At this time the carpenters prepared on the shore the wooden superstructures, which then were placed on the restored supports.

Repair, reinforcing and the moving of span structures are the most responsible and most complicated processes. Indeed it was necessary to move the surviving 300-ton span structures to the place of those exploded.

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But for this bulky steel objects it was necessary to move to tens of meters, along and across the axis of bridge. But this was not all. Each span structure needed a certain method of adjustment and repair. In one span the correction of portal panel was required only. In the adjacent span was necessary about 40 linear meters of span structure to raise and to bring wooden support under it. In the end span they

an interval of 19.5 linear meters long was covered by a pack of H-beams.

There were no specialists in metal construction in our administration. We turned for help to the main administration. On the second day to us arrived the commander of GUVVR, General V. A. Golovko, and leading specialist in metal constructions, N. A. Aleksin. To him it was assigned to lead repair and moving of span structures. At the disposal of Nikolai Alexandrovich we designated the 1st and 2nd companies of the 14th bridge battalion. The 1st company commanded Captain V. A. Borzov, and the 2nd - captain S. V. Doronin. The company of Doronin Aleksin was assigned to construct upper rolling paths for two spans, to establish winches and block-and-tackles, with the aid of which the moving of span structures was then achieved.

Construction sharply needed metal of certain types, which was not on the spot. It was necessary to deliver it from Moscow. The deputy commander of the railroad troops in the rear, Colonel N. G. Desyatkin, dealt with this question. At his disposal there was a special automobile column. And, from the first day of construction to the last it went back and forth between Moscow and Liski.

The delivery of lumber was not a smaller difficulty. We prepared

it, as I already spoke, in the forest, near Khrenov station. From Liski to the cutting area it was 70 kilometers. The 3rd company of the 14th bridge battalion was occupied with the delivery of wood. Captain V. P. Voronin commanded company. Men were young, energetic, resourceful.

The removal of wood from the cutting area to the station proved to be most complicated. Lack of roads, snow higher than your belt, little transport. Not a single tractor, two 1 and 1/2-ton and one 3-ton motor vehicles, 15 horses.

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Those were all the means of delivery. Voronin turned for help to the local residents. Several hundred Soviet people with gladness came to help us. They were armed with their cords and cables and went into the forest. By portage along the snow road after several days entire prepared lumber was moved to the station and loaded in the cars.

For me, it seems not for one minute did the number 20 leave my head. The time was hard, and in order to get along, each day must be used with the maximum effect. On the basis of the common calendar graph of restoration we developed the graphs for the execution of basic operations for each subunit and strictly they followed the

operation. During these days I frequently was on the construction site. The structure was dressed in scaffolding, energetically knocked pile drivers, grumbled winches, incessant chattered pneumatic hammers. Work of our people succeeded. In the subunit socialist competition was deployed. For the fast execution of the operating schedule company with company, platoon with platoon, squad with squad competed. Each soldier knew his mission, his maneuver. This was the great success of the political workers of the 19th brigade and commander of the political department of brigade Colonel V. V. Polotev. Vladimir Vladimirovich Polotev was characterized by enviable efficiency. He managed in the day to visit both Liski bridge and other sectors, where brigade worked. The condition of political work in the units of this large formation neither me nor my deputy M. B. Yakhnovich ever bothered. We knew that, whereever Polotev was, order was assured, soldiers and officers prepared for the execution of any task. Even now he skillfully organized the political support of construction. In the interruptions Vladimir Vladimirovich and political workers conversed with the soldiers. In the subunits they organized the issue of combat news bulitins. At visible places appeared slogans, which called for the selfless work, for early execution of combat assignment for the party and government. Communists were authentic leaders during the construction. They arose in the heaviest and most dangerous sectors. The moving of span structures was one of such sectors. This operation was conducted on

the special rolling supports. To the supports special rolling paths were laid. On them with the aid of the winches were moved the trusses.

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They moved slowly, carefully. Engineer Aleksin stood on the rise and commanded:

- Forward! Slower! Stop!.

From the river the freezing wind blew, but not one of the workers noted it. Selflessly worked on the winches and the jacks the soldiers Sorokin, Marchenko, Ignatov, Chemodanov. Together with them worked commander the Major V. V. Bobrikov (now Candidate in Technical Sciences, the docent of the Moscow institute of the engineers of rail transport) and company commander captain M. S. Lipatov. As always, unexpectedly was given the signal of battle alert. Anti-aircraft guns sounded. I jerked head upwards and saw almost above the bridge German aircraft. Began to whistle, thundered bombs.

Aircraft made the second approach to the bridge, but they were hindered from precision bombing by ack-ack guns. I glanced at the front of operation. All soldiers and commanders were at their places.

No one broke into a run for cover. Even steeplejacks continued to work at the trusses of bridge. Approached me Polotev joyfully nodding head.

- With such people, Pavel Alekseyevich, we will before the appointed time restore bridge!

- It is undoubted! - I agreed. - let us even try recalculate the graph. Two days can be saved.

- I did not suppose, when he exploded these bridges, that so soon it is necessary to restore them!

- Much we in this war did not suppose. Who thought that the Germans will reach Volga.

They approached the fifth support, we look, soldiers brought rail on their shoulders, hung up on the base of truss and began by hand to ram down track. But where pneumatic hammers? At this time on the scaffolding the thickset figure of Colonel I. M. Shapovalov appeared. He deftly jumped from the stepladder and ran up to us.

- Comrade General, compressor broke down, reported Joseph Mironovich, yes even hammers do not obey. They do not want in the

cold to work.

Frost seemed to test the reliability of our vehicles and mechanisms. During this day refused also the hydraulic jacks. The lifting of the span structures was stopped. The operating schedule was threatened by disruption. And then skillful individuals undertook our bridge operation.

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Jackhammer operators Sorokin and Marchenko gave their word that by evening they would correct their mechanisms. Commanders decided with them not to interfere. No one into the workshop went. All anxiously awaited results. Soldiers dismantled hydraulic jacks, they replaced something, they ground it, they fit it. And glad Aleksin thus to me came running. Still from a distance he reported:

Let's go!

Sorokin and Marchenko changed the design of valves in pumps, and jacks started working. Then they started in on the fuel pumps of captured diesel pile drivers. We all greatly worried about soldiers. They will manage? Indeed technology is unknown. Joseph Mironovich Shapovalov calmed us:

- My skillful individuals will make it, they just as Lersha, can put shoes on a flea, but to revive pile drivers is for them nothing !

I inquired, what the soldiers were doing with the pumps.

- Empirically is selected the frost-resistant composition of fuel.

- You do think, this it is sufficient?

- Completely. You hear, as experimental pile driver already it sneezes. Soon it will start working !

In the morning for piledriver operators it was possible to select the necessary mixture of fuel, and pile drivers harmoniously rattled away. My respect for I. M. Shapovalov and his skillful individuals even more got stronger. People, accurate to their word, dedcated to task and gifted inventors.

Bridge came to life. This harassed Hitlerites. From th bombings in small groups of aircraft they went on to massraids. Now I ordered all unconditionally to be concealed. In the first days of February I

had only driven up to the construction site, when began to ring car buffer - air alert signal. People broke into a run for cover. They went down into trench and we with Zingorenko. We observe. The large group of hostile aircraft then appeared. Then it was divided. Some of the carrion vultures made a great circle above the antiaircraft battery, changed into combat formation and in a row went to the target. Ack-ack guns raged, squealed bombs, from the bursts the ground shook. After dropping bombs, aircraft one after another rocketed into the sky.

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We saw, how to the antiaircraft gunner ran nurses and medics with the bags over arms and with litters. Among them I saw regimental doctor Major M. K. Baranovich. He headed medical service during the construction. Patients during those days were few, aid station was empty. Baranovich knew that the staff officers of regiment were greatly overloaded. Therefore he asked unit commander for some of responsibilities for himself. Soon Baranovich in a new way organized the transportation of materials from the construction site directly to the work sites, which increased the productivity of cargo motor vehicles and tractors. Baranovich was assigned to coordinate the activities of the post of VNOS [BHOC - aircraft-warning service] with the work of the mobile electric station. During the raids of hostile

aviation he provided timely connection and disconnection of electric light at building site.

The battery of the air defense of bridge commanded young courageous Lieutenant Leonid Ivanovich Zinov'yev. Battery had four quadrupled antiaircraft machine gun installations and six captured automatic guns of system "Oerlikon". German pilots felt the accuracy of the fire from our antiaircraft gunner. Repeatedly they had to fly back, having dropped not a single bomb. Obviously, today embittered by failures Hitlerites decided to get back at the antiaircraft gunner. But battery did not tremble. Guns and machine guns fell silent not for one minute. But then the flight [group of four] carrion vultures at low-level flight moved out to the firing positions of antiaircraft gunner. Battery was hidden in the columns of smoke and snow dust. Guns and machine guns fell silent. The second group of German aircraft took advantage of this and it rushed to the bridge. The ground again began to moan. Tractor dived under ice, fire encompassed compressor.

Suddenly among bomb bursts on ice of river cargo vehicle appeared. From the compartment the chauffeur in the overalls jumped out and he broke into a run to the bridge. Within several minutes he returned with a casualty on his back. After laying him into the cab, driver again broke into a run to the bridge and brought the second

casualty. To the aid to brave man rushed the aidmen and soldiers. They began to bring casualties and to place them in the vehicle. When all victims were collected, the driver got behind the wheel, and vehicle dashed in the direction of the field hospital.

Later I learned the surname of courageous driver. This was private Leonid Mezhennikov. He is live and healthy. He now works in taxi motor pool of Chernigov.

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During the same day the Germans also subjected to the bitter bombing the Liski station. There performed the operations company and several subunits of the 9th track battalion of the 19th railroad brigade, and also local railroad workers. The division head of the clothing and equipment supply of the 15th railroad regiment, Captain V. A. Takchevskiy, led rescue operations at the station. Soldiers disengaged the burning armed cars and tanks with gasoline from the trains. By steam powered switch engine were removed the intact groups of cars into the safe zones.

All attempts of the enemy to tear away the restoration of bridge with the aid of the massed bombings did not have a success. Bridge was restored in 18 days, two days earlier than the deadline. We

passed our test of maturity with honor. We demonstrated in reality that they were capable of not only placing obstacles, and destroying, but also of restoring large artificial structures. About 80 soldiers and officers they were rewarded by government with orders and medals.

The reactivation of Liski bridge was only a part of our works. Simultaneously we restored sectors of the Liski - Valuyka, Kupyansk - Belgorod and Liski - Kantemirovka track, built the destroyed bridges across the rivers Oskol and Kupyansk and Severskiy Donets in Belgorod. The main plines, which passed on the territory, temporarily occupied were especially strongly destroyed by enemy. Superstructure of track on the lines from Liski to Ostrogozhska and from Liski to Yevdakova was almost completely disabled. Together with our subunits and detachments of the special-formations of the NKPS on the restoration of these sectors local railroad workers and population worked. Led works my deputy director-Colonel V. S. Dmitriev, head of track division of the administration director-Colonel P. I. Krotenko, and one of the most experienced railroad workers of our front, the chief engineer of the 19th brigade engineer lieutenant-colonel P. K. Kuleshov. Skillful organizer, he excellently managed his responsibilities.

And finally, recalling my combat friends, I want to say several words about the commander of the political department of the railroad

forces of Voronezh Front, my deputy on the political unit, Mark Borisovich Yakhnovich.

end section.

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He arrived to us from the 27th railroad brigade, where for a long time he was commissar. Sociable, ingenious, Mark Borisovich won you over from the first acquaintance. He well examined people and knew how to find approach to each. Moreover, Mark Borisovich was a good speaker. Somehow in the conversation with me he gave the words of Maxim Gor'kiy: "Heroic time requires heroic word". And he spoke always passionately, with conviction.

Yakhnovich gave considerable attention to the educational work with the personnel to the propaganda of advanced experience. To outstanding workers and to rationalizers [time and motion experts] were devoted combat leaflets, wall newspapers, whole numbers of brigade factory newspapers and special posters with the photographs. This purposeful political service increased the rates of restoration of tracks and man-made structures.

Roads were revived not in days, but in hours. People worked zealous, and conscientiously. The commander of GUVVR, Major General

of the technical forces, V. A. Golovko, rendered great aid to us in the organization of works. I knew already Vladimir Alexandrovich from the military transport academy, where he headed one of the departments. Among the instructors and the students of academy he had large authority. They respected him for the courage in the thoughts and the activities, for the intimate knowledge of rail transport and the large practical experience. Golovko was one of the veterans of the railroad forces. During the years of civil war Vladimir Alexandrovich commanded the maintenance company of the 35th railroad battalion. Then he studied, again commanded, but this time large formations, and became one of the outstanding specialists in his field. Until now, I was not contacted closely with Vladimir Aleksandrovichem and only now understood, what a wonderful person he was. Attentive, sensitive in relation to the people was the remarkable trait of his character. He did not oppress us with his authority, he did not stifle initiative. Carefully, without the shouts, in the form of good comradely advice council he corrected us, where it was necessarily. In the care of explicit omissions in the work he quietly, but firmly indicated the deficiencies. General Golovko noticed entire good and did not hide his satisfaction.

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I remember, after arriving at the Liskinskiy bridge, he was

introduced to the detachments and the project of restoration. Attentively he inspected the operation's front, and then said to us:

- Here everything is in order and I have nothing to do. I will go out to the stages.

From this day the large part of the time Vladimir Alexandrovich spent on the Valulki-Kharkov line. The forces of our front stormed Kharkov. Railroad to them was as necessary as air. Railroad battalions restored the heaviest sectors, on the lighter worked local railroad workers and population under the guidance of our officers. Sector from Lisok to Yevdakovo restored the soldiers of the 31st path battalion of Major B. M. Vasil'yev, energetic, resourceful commander. When for piling the tracks there began not to be sufficient ties and rails, commander ordered to dismantle the deserted, rarely utilized spurs, branches and station tracks . Transported finished material to the place of works local collective farmers on sleds, pulled by buffalos and cows, a pair to each harness. Soldiers named this form of transport "Mu-2". When were laid the first stages, rails and ties began to be supplied on the platforms. Having completed its usefullness "Mu-2" was retired.

Much it was necessary to take some pains with the battalions of Major I. V. Sytnik and K. A. Stepanov. And here most of all of

troubles came from searches and procurement of materials. Soldiers dismantled side tracks, spurs, secondary branches. From the exploded rails were cut 3-4-meter healthy pieces, so-called logs were cut down. In field forges were forged skids, the bolts, nuts and even tracks were forged. Old cross pieces were restored. Each meter of track was obtained difficultly. Stages one after others went into service.

V. A. Golovko saw all these difficulties. He was enraptured by the patience and courage of soldier and officers. After meeting me on one of the stages, General said:

- What fine people ! Your people are gold!

At the end of January of 1943 General Philipp Ivanovich Golikov, commander of Voronezh Front, called me to himself into the headquarters. Was located headquarters in the small city Bobrov, in the wooden single-story house.

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In Golikov's office the representative of general headquarters, General-Colonel Aleksandr Mikhaylovich Vasilevsky, and the member of the military council of front, General Fedor Fedotovich Kuznetsov,

were situated. I reported to General Vasilevsky about my arrival. Golikov proposed to me to describe about the course of restoration works.

- We take all measures in order to get the trains moving to Valuyki on time... - I began, but here me interrupted A. M. Vasilevsky:

- And why do you consider the main direction to be Liski-Valuyki?

Nothing suspecting, I answered:

- The troops of our front attack to Kharkov. The shortest path there lies through Valuyki. Simultaneously we are restoring sectors, also, in the direction of Rossosh'.

- Yes, this is the main axis of your front. But general headquarters considers that you must help the southwestern Front to restore the railroads, which go to the surrounded grouping of Germans,.

Patiently, with great tact Aleksandr Mikhaylovich explained to me, which lines of Rossosh'-Millerovo direction first of all must be

made operational.

I proposed on those indicated by A. M. Vasilevsky sectors to place the 12th railroad brigade, which must any minute now arrive from Chelyabinsk. After obtaining the agreement of command element, hastened to Liski. But there was great my disappointment, when instead of the brigade I found her there only its operations group. Brigadier general Lieutenant Colonel G. S. Bocharnikov, tall, broad-shouldered, appearing to be about forty, approached me.

- Where is your brigade? - I, asked.

- On the way from Chelyabinsk to Povorino...

- Thanks, great ! Brigade now is so necessary here !

It was necessary to urgently take measures to give the trains of brigade the "green light". Now they were tied to the VOSO administration, the commanders of the railroads, NKPS. Us they assured, that delays to trains there would not be.

To Bocharnikov I proposed immediately to leave together with the operations group into Rossosh'. The headquarters of the 9th battalion there was located, and there was also located my deputy Dmitriyev. He

had to acquaint Bocharnikov with the situation, which had developed in this sector.

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the 9th battalion of Major Sytnik concluded the restoration of the last stages of Chertkovo-Millerovo sector and conducted technical reconnaissance of the recently liberated from the enemy main Pasekovo-Rossosh'- Podgorny line with extent of about 70 kilometers.

The most labor-consuming works in the Rossosh'-Millerovo sector was the restoration of the bridge across the river Chernaya Kalitva and the almost completely destroyed 16-kilometer stage Rossosh'-Raynovskaya. When Lieutenant Colonel G. S. Bocharnikov with his operations group arrived in Rossosh', I removed the 9th battalion from the construction of bridge and wholly switched it to the restoration of track. To the aid to the 9th battalion on Golovko's instruction were directed the newly arrived 33 track battalion making up the 19th brigade, which Major V. G. Belyavskiy commanded.

As usual, immediately arose difficulties with the materials and the structures. On the searches for improvised materials they sent all headquarters workers of battalion. And were here especially distinguished the commander of the ammunition supply of the 9th

battalion, quartermaster P. V. Guzov, with his assistants, military technician Yefimenko, and Chief Petty Officer G. A. Makovoz. They discovered in the area of Rossosh' a base of building materials cast out by Germans for narrow-gage railways. On the base there was for several tens of kilometers of trackrails, ties, attachments and points and crossings. In spurs they stood 20 new diesel locomotives, 50 platforms. In our hands fell several cargo motor vehicles, two compressors, power station, autogenous apparatuses with oxygen and acetylene tanks and many different tools.

The assistant to the commander of the 9th battalion on technical section the engineer captain M. I. Bakhmutov and the senior engineer of technical section, the Engineer Captain V. Ya. Belyakov, most of all were enthusiastic about another finding. On the depot they found a complete set of geodetic and drawing tools. Our prospectors and technician-draftsmen severely needed it. We shared all this equipment between the units of the 19th and 12th brigades.

Now several words about our miners. In spite of hasty retreat, Germans mined many railroad objectives of sector. Especially they covered crossings with mines. Here it was necessary to defuse antitank mines primarily. In the area of stations Podgorny, Gartmashevka, Gartmashevka, Chertkovo, and Millerovo they cleared mines from large terrain sectors.

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As a result in the railroad axis Podgorny-Millerovo, more than 200 km in length our miners rendered harmless more than thousand different mines.

Meanwhile with the approach of the trains of the brigade of Bocharnikov the rates of the restoration of the Chernokalitvinsk bridge were increased. It was built in short term from improvised material. Technical specifications were extremely light. The length of bridge was 80 linear meters. In its design it was low-water, it was erected on by-pass of old destroyed installation. Supports were crib-worked. Used here were logs from the cold construction sites, old ties. Span structures were built from the rail packages and the H-beams, which werefound in the sector. Bridge bed was made from the beams, taken from the destroyed span structures of old bridge. The builders of the 12th railroad brigade borrowed the experience of restoration works from personnel of the 9th battalion. Especially aided Lieutenant Colonel Bocharnikov the engineers of battalion M. I. Bakhmutov and V. D. Melnikov. As a result we in time finished the restoration of the belt sector of the southwestern Front to Millerovo and on 4 February the trains started moving.

After making operational this sector, I went to the Kupyansk-Belgorod line in order on the spot to be introduced to the situation of affairs in the 19th railroad brigade. Hardly had I arrived in Kupyansk, when to me at the headquarters of brigade they handed the telegraph message of the deputy of Peoples Commissar I. D. Gotseridze. He proposed urgently to leave for Liski to the rendezvous with the member of GKO, the national commissar of coal industry. The movement of trains to Kupyansk by this time we had initiated, and it was possible to go on the hand car. But line was heavily loaded, towards us came trains to the front, and I decided to use passenger motor vehicle. My EMKA [Note: some sort of a motor vehicle] continually jammed in the snowdrifts, with great difficulty it reached Valuek. Several kilometers from the highway to the station I went on foot. The junction was being restored by the 9th battalion, which was relocated here from the belt railroad. Commander Major Sytnik seated me on hand car, and I continued my trip to Liski. In Liski I visited the headquarters of the administration. S. V. Brykin reported that the Peoples Commissar had already arrived, he reported to me situation in the sectors and warned:

- Have in mind, Pavel Alekseyevich, the Peoples Commissar was visited by the commander of the southeastern road, Tkachenko, and he

complained to us. Allegedly we have the low quality of works.

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I entered the passenger cabin of car being short of breath, in the felt boots and the padded breeches - my working clothing. With the hostility after inspecting me from feet to head, Peoples Commissar said:

- You make it necessary to wait for you!

I began to tell why, referring to snowdrifts, the overload of line, but he interrupted me:

- The quality of works in you is low. Drain pipes are filled up. Soon spring, high water. Where water will go? The bridge through Chernaya Kalitva is rocking under the trains.

I agreed with him:

- Yes, bridge hardly holds!

He astonished asked:

- Do you realize what you have said?

Agitating, I explained:

- On my order this bridge was restored by the twelfth brigade. Lieutenant Colonel Bocharnikov commands brigade. The man is experienced, knows his work. Bridge was restored in short term. For the steady motion of trains it is necessary to construct temporary bridge. To make it are obligated the troops of the southwestern Front. This is their sector.

By all indications, the Peoples Commissar was astonished. It became clear to me that he was misinformed by Tkachenko and he fell into awkward position. I described to him by what methods and in what cases are built short term bridges. I described that the technical requirements on them are very light. During January we could not rapidly place temporary bridge. Situation did not make it possible to deliver the necessary materials. The Chernokalitva bridge was prepared simultaneously with the Liski. Otherwise it was not possible to get trains moving on the belt road.

- I believe that Bocharnikov successfully ~~dalt~~ dealt with his problem and ther is nothing to condemn him for.

Then I explained that were not substantiated the charges, of, the filling of drain pipes. The retreating fascists exploded the pipes simultaneously with the bridges. Now our soldiers are making openings and wooden pipes. Works occur by the graph. By the spring seasonal flood they will be completed.

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During our conversation into the room the commander of UVVR-5 of the southwestern Front, Major General of the technical forces N. V. Zverev entered. As I already said, the sector of the road of Liski - Likhaya, which we restored, was located in the zone of attack of the southwestern Front. The UVVR-5 was necessary to build the temporary bridge across the river Chernaya Kalitva. But Zverev began to complain about deficiency in the forces and mechanisms. Peoples Commissar thought of something and proposed:

- I ask you, comrade Kabanov, to restore/reduce this bridge. Aid the southwestern Front.

I answered, that I will place on the bridge the unit of the 15th bridge of regiment. But it is obvious, Peoples Commissar of coal industry noted that I am astonished by his interference in the railroad affairs. He went into his compartment and showed me mandate

signed by I. V. Stalin. I took in this document with my eyes. In ~~it~~ it was indicated that he was entrusted to organize in the Donbass the restoration of mines and the removal of coal to the center of the country. But for solving this question railroads are necessary. But many sectors remained yet unrestored. Forces were not sufficient. Peoples Commissar asked in me:

- How is solved the question with the restoration of the line of Valyuki-Kastornoye?

- For the Voronezh Front this line particular interest does not represent, just secondary. Now all our forces we concentrated on the sector Valuyki-Kupyansk-Belgorod and Kupyansk-Kharkov. In proportion to the release of forces from these sectors we will restore sector of Valuyki-Kastornoye, in this sector now works alone only the seventh of gorem [forward repair train].

- This line is necessary for the country just as the production of Donets coal. I ask you to today develop a draft of the plan of its restoration and to tomorrow in the morning present it to me for the confirmation !

Extent of sector from Valuek to Kastornoye is 220 kilometers. Germans destroyed all man-made structures, stations, water-supply

points and depot constructions on it. To basic destruction was subjected also main track.

Entire night I together with the commander of plan-technical department for our administration, S. M. Lengo, S. V. Brykin and engineers of the headquarters of the administration worked out the draft of plan.

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In the morning Peoples Commissar examined it and shortened the period of readiness by two days. Instead of 23 March he placed 21 and signed plan.

According to the affirmed plan line of 71 kilometers on the part of Kastornoye must be restored by the 77th path battalion of the 5th railroad brigade. Major P. I. Korshunov commanded battalion. Towards him from the direction of Valuek should come forward repair train No 7, commander of which was I. V. Timofeyev, chief engineer V. I. Ogarkov. I from the car of Peoples Commissar immediately telephoned to headquarters of the administration to S. V. Brykin, reported to him about the confirmation of plan and ordered to put him into the activity. This operational efficiency pleased the Peoples Commissar. He approvingly looked on me and proposed that I go with him to the

Chernokalitva bridge.

The group of engineers arrived with him from Moscow. After the inspection of the place of future construction the Peoples Commissar did gather the conference of specialists and did raise before us this question: according to what version is it more advantageous to build temporary bridge? Colonel Shapovalov, the commander of the 15th bridge regiment who had been present at the conference, and was appointed as construction commander, proposed to build new bridge along the old axis, for which it was necessary to raise the collapsed span structure. The engineers escorting Peoples Commissar insisted on the installation of the dismountable span structure BRM-30. They began to argue. We with Shapovalov proved that these span structures are heavy, are bulky, with the length of 88 meters. They are found on the bridge base of NKPS in Yaroslavl', and in the delivery much time will be required. The former span structure is torn into three units. To us is easier and quicker to raise them and to place on intermediate supports. This will considerably shorten the period of restoration. However, we will save the plant span structures for another bridge.

Specialists received our version with distrust. but Peoples Commissar preferred to affirm it. He said:

- They have a better idea how to build. Let it be this way !

After conference we with Shapovalov and the engineers of his regiment again attentively inspected the destroyed bridge. They decided first of all to clear the river bed, to adjust the preserved part of the abutments, to correct on both sides of bridge, the embankment under the approaches.

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Regiment at this time removed imperfections on the Liska bridge and prepared it for the spring seasonal flood. For the completion of the works of Shapovalov there remained the 3rd battalion of Major V. D. Burtsev. He transferred the bridge battalions of captain B. V. Bobrikov and Senior Lieutenant I. S. Saranchuk to the construction of the Chernokalitva bridge. Together with him transferred, technical section of the regiment in the composition of captains P. A. Shitikov and V. K. Beschastniy, senior lieutenants of tech. services N. I. Sidorov and D. Ya. Birmin. We assigned this group of engineers to development of the design of the restoration of temporary bridge.

Worked the bridge builders of regiment around the clock in turns. Between the subunits was deployed the socialist competition, the course of which the political workers monitered. An example in

the labor were communists at the head with their leader by Senior Lieutenant N. I. Sidorov (now the deputy minister of public health of the RSFSR). German aviation did not leave builders alone. The antiaircraft battery, tempered in combat on the Liska bridge under the command element of the Senior Lieutenant L. I. Zinov'yev, skillfully repelled the raids of carrion vultures.

The tamping of piles proved to be very labor-consuming affair. Soil was silt, piles entered into it as knife into oil. The depth of tamping reached 22 meters. They three times increased each support, until they achieved "refusal"- solid ground. With all these difficulties they restored bridge on time in 12 days. The trains through it went at a rate of 40-45 kilometers an hour.

In the middle of February at the disposal of our directorate the 7th railroad brigade arrived from Irkutsk. Colonel N. I. Novosel'skiy commanded it. I immediately placed brigade on the Valuyki junction and sector of Valuyki-Kastornoye to help to the 77th battalion and forward repair train No 7. Personnel of brigade almost from the first day accurately executed the operating schedule. The successes of the brigade of Novosel'skiy inspired me. In the conversation on the telephone with V. A. Golovko I reported, that the movement of trains on the line before Kastornoye was opened in time. Vladimir Alexandrovich reported this to the national commissar of lines of

communication. Peoples Commissar knew, how seriously Germans destroyed this line, and to my assurances he reacted with distrust. For checking the condition of affairs he sent special commission. He assigned commander of one of the central divisions of the NKPS N. N. Sokolov as its chairman.

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Serving on the commission was the commander of the Moscow-Donbas railroad N. A. Pichugin.

Commission arrived in the sector three days before it was planned to become operational. Naturally, much was still not finished. After arriving at The construction of the bridge across the river Kotel at Staryy Oskol, Sokolov and Pichugin found not one of the commanders of the 7th brigade. Our soldiers worked on the objective. Much needed to be done on the stages and the stations. In the members of commission the impression was created, that line will not be ready by planned period - on 21 March. Without considering, Sokolov telegraphed the NKPS, that the affairs on the line go badly and by 21 March will not be ready. After this N. A. Pichugin returned to Staryy Oskol, and Sokolov came to me in Valuyki. Without greating me, he cast an angry look at me, acidly he smiled:

- We shout "jump", without having jumped over pit ! Not one objective is completely completed. On the StaryyOskol bridge thereis nobody. Where are your people, comrade General?

- Everything is in place. Line will match the graph in two days !

- I doubt it! I notified the NKPS, that by twenty first March the trains will not be moving in the sector.

- You spoke too soon, you in vain gave this telegraph message. Line will be ready in time. We work by the graph. There are no delays.

Thoroughly using the calendar graph I acquainted Sokolov with the organization of affair. I described the people, which head construction. Brigade commander N. I. Novosel'skiy, leaders of the forward repair train, I. V. Timofeyev and V. I. Ogarkov, commander P. I. Korshunov - experienced specialists. They never let administration down. If they gave word, then they will surely keep it. As for the bridge over the Kotel, it is low, with length of 80 meters. In three days the forward repair trains will finish its restoration.

Under the effect of my reasoning Nikolai Nikolayevich became

calm. At this time into the car messenger brought to me telegraph message from the Peoples Commissar. It read approximately as follows: comrade Kabanov, you promised, what to 21 March sector of Valuyki-Kastornoye will be operational. They reported to me that the works strongly lag. I ask you to take all measures for making line operational on time.

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In the morning we with N. N. Sokolov left on hand car toward Staryy Oskol. On river Kotel still from a distance we saw many people. Next to the soldiers the local residents worked. Gray overcoats were mixed with the sheepskin coats, the black coats and ~~the~~ colorful shawls. The commander of forward train repair, I. V. Timofeev, approached us and he reported:

- Tomorrow by sixteen hours bridge will be ready!

N. A. Pichugin was already on the bridge and approached us. After hearing Timofeev's report, he smiled:

- I in this do not especially believe. But if you get the trains moving at this time, I will attain from KNPS as bonus-awarding of all builders twenty five thousand rubles !

Next day, on 20 March, 1943, at 16 hours our hand car crossed finished bridge. After it we passed train with cargo. Entire sector of path was put into operation one day earlier than the established period. Sokolov shook my hand and with regret said:

- We were too quick with the telegraph message to the NKPS!

I approached Pichugin:

- Pay on the nail!

- I do not have it, I will request it from the NKPS.

He kept his word. In the morning of 21 March I obtained from the Peoples Commissar the telegraph message, in which was communicated that for premature putting to use of the sector of Valuyiki-Kastornoye as bonus-awarding of personnel of the railroad troops of our front were allocated 100 thousand rubles.

I have already told the reader, that after the withdrawal of the Soviet troops on 8 August, 1942, our miner-railroad workers exploded the bridge across Don river at the Lozhki sidetrack. All spans of

this bridge, except two bank ones, lay destroyed in the river. Upper portions of almost all supports were destroyed. Hitlerites had attempted to restore structure. They had brought to the construction site materials, prepared mud huts for the workers, but further this affair with them it did not go. Our soldiers joked:

The fascists did not have enough powder (were not up to it)!

The Lozhka is a nonstandard bridge. It is very complicated in its design and very metal-consuming. For its restoration the GKO made special decision. Construction commander assigned was the commander for the central division of method and man-made structures of the NKPS, Vladimir Semenovich Gavrilov.

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For the implementation of the decision of GKO, 27 December 1942 the national commissar of lines of communication published his order. N.F. Bobrikov commander of the trust of bridge repairer became chief engineer and the deputy construction commander. As the deputies of construction commander were assigned also commander of bridge detachment No. 2 I. Yu. Barenboym and L. D. Saprykin - his deputy.

On 31 December Gavrilov with the group of engineers arrived at

the bridge. The group included the outstanding specialists: A. M. Cherkesov, N. B. Lyalin, A. V. Varshavskiy, V. I. Mitrofanov, V. A. Aleshin and N. N. Tikhonov. Entrusted to each of them was a specific sector of work. N. N. Tikhonov headed the development of design. Guidance of engineering office they entrusted to A. M. Cherkesov. as master mechanic was assigned A. V. Varshavskiy. V. I. Mitrofanov was occupied with questions of supply. Colonel S. K. Pompe became the chief of staff of construction.

Bridge was eleven spans with an overall length of 725 linear meters. We decided to restore it along the old axis. 12 days was spent in mine clearing of future construction site and different preparatory works - construction of dwellings, reception and quartering of arrivals: bridge detachment No. 2, bridge train No. 29, repair-welding train No. 4 of the 4th bridge battalion of the 13th railroad brigade and 15th bridge battalion of the 27th railroad brigade. In all for the construction arrived 2800 people.

Gavrilov divided the entire construction site into five sectors. To each of them were attached military subunits and the special-formations, whose commanders became the commanders of sectors. The engineers of the headquarters of construction developed the calendar graph of the restoration of bridge as a whole and on each sector. However, from the first day of the beginning of works

Gavrilov established the following order - at the end of workday all heads of construction were gathered to the scheduler and reported about the work accomplished. Measures for the correction of errors, elimination of imperfections here were planned. The schedulers were managed by construction commander himself and only in the rare cases - one of his deputies.

The construction of bridge was deployed under the very severe conditions. Yet there was no direct railway communication with the Lozhki siding.

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Materials, fuel and rations were delivered by motor vehicles along the broken dirt roads for 120 kilometers from the station Kachalino. More than 3500 cubic meters of wood, approximately 1000 tons of metal and hundreds of tons of fuel and rations were required. Motor vehicles were not sufficient, cartage helped out. Only toward the end of the construction additionally arrived 66 cargo vehicles.

People worked heroically, in the wind, in the rain with the snow, under the continuous bombings. Communists showed an example of courage. Carpenter Fedor Klochok said at one meeting:

- The eyes - are the measure, soul - the faith and conscience - the guarentee. Let us errect bridge in fifty two days!

And they did it! In 52 days - this the government period. On 6 March, 1943, on bridge was heard the whistle of break-in steam locomotive. Was great the gladness of builders. But Hitlerites darkened this solemn day. Hardly had steam locomotive passed over bridge, when several tens of German aircraft arrived. Direct hit of the bombs made ~~completely The~~ ninth support totally useless and two span structures were rendered completely useless by the direct hit of bombs, In the bridge gaped a hole 154 meters in length. But the most terrible - death of our dear comrades! We lost 102 people, and among them the commander of engineering office of construction A. M. Cherkesova and most talented engineer, bright soul of man ~~of~~ A. A. Vasil'yev. By the edict of the Presidium of the Supreme Soviet of the USSR posthumously they were awarded the rank of Hero of Socialist Labor.

To the healing of the wounds to bridge were required 16 days. Again people worked in the ice wind, under the bombs, in the alarming dark of sleepless nights. Again engineers worked out the project of clearing and supply workers searched for materials. Enemy understood the strategic value of the Lozhka bridge and entire line Stalingrad - Likhya. Not on a single day did German aviation force the builders of

bridge to rest. Within the operating time the fascists dropped only the high-explosive bombs of a heavy caliber of 350 pieces. But all attempts of the enemy were vain. Within 16 days the bridge was again ready to the reception/~~method~~ of trains. Whistle of steam locomotive ! The wheels of cars knocked. Beyond the bridge frost haze of the early morning absorbed the tail signals of train. So for a second time and finally became operational the long-suffering Lozhka bridge!

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The construction commander of the Lozhka bridge Vladimir Semenovich Gavrilov - experienced, hereditary civil engineer. His father, Semen Yemel'yanovich gave to transport more than fifty years of his life. He worked as track worker, road foreman, then as the commander of a stretch of track in Riga, Livnakh, Voronezh, and Maloyaroslavets. In Thirties Semen Yemel'yanovich was invited by the Peoples Commissar to work in the central division of tracks and artificial structures of the NKPS as a consultant. The civil engineers of the entire network of railroads knew Semen Yemel'yanovich and respected him.

Son inherited many good traits of character from the father. Like father, Vladimir Semenovich is simple in his relation with the people, is industrious. A man of his word. He began his labor career

with the packing of ties. A student of the Moscow institute of the Engineers of the Rail Transport (MIIT [МИИТ - Moscow Institute of Railroad Transportation Engineers]), who graduated /ain 1935. He worked on the Amur railroad as the remote commander of the railroad, then - railroad services. In 1939 he became the chief engineer for the central division of tracks and man-made structures of the NKPS. Soon Vladimir Semenovich was appointed as the commander for this control and as the member of the board of people's commissariat. Several years father worked under the guidance of his son. Now V. S. Garilov - is deputy minister of lines of communication.

In the course of grandiose Stalingrad battle the enemy captured many railroad lines and cut them. The established cargo flows were disrupted and seemingly would break down. Oil and coal began to enter the center of the country not from the south, but from the east. Many secondary axes became basic, main courses. The operations of the railroad forces depended on the needs of front and combat situation. Indeed the success of the operations of our forces in many respects was determined by timely restoration of main lines. So unexpectedly arose the need to strengthen the Talovaya-Kalach spur, since at the terminal Kalach was based one of the armies of Voronezh Front. The length of branch is approximately 100 kilometers, it was constructed even before the revolution. The steam locomotives which worked on it were light series "O" - "lamb". And the heavy comercial traffic,

which "lambs" could not manage, went to Talovaya.

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The work of the station was complicated, since it was necessary to divide each train into two parts. Then we decided to construct alternate route from the main axis. This would make it possible for trains to enter branch, without going to the Talovaya station. Rapidly was conducted the necessary repair of track and, having in detail inspected bridges, they replaced beams. For inspecting the durability of bridges they released experimental train of limited speed. Train passed happily, and we ascertained that the bridges were constructed with the large safety factor.

After the rout of Germans in the environs of Stalingrad our troops freed the enormous territory of the country. Toward the end of March the troops of Voronezh Front were consolidated on the line to Krasnopole'e, which is north of Belgorod, and further on the left shore of the Severskiy Donets. The southern leg of the so-called Kursk projection was formed. This projection it was fated to play an important role in the future great battle.

In the course of March combat some restored sectors of road and bridges it was necessary to again destroy. So we exploded the

recently constructed bridge over the Severskiy Donets in Belgorod and destroyed the stages adjacent to the bridge.

In spite of some failures, the total of winter and spring campaign was distinct. To 1 April, 1943, the troops for our administration restored about 1200 kilometers of track. We introduced such large sectors into activity as Liski-Valuyki, Valuyki-Kupyansk-Belgorod, Belgorod-Kharkov, Belgorod-Kursk, Voronezh-Kastornaya-Kursk, and Liski-Rossosh'. Across the rivers Don, Severskiy Donets, Oskol, were constructed large bridges, medium bridges - across the Chernaya Kalitva, Usman', Tim, and Vorona. Lines were equipped with water supply, communications means of signalling. Work was giant. And nevertheless this was only the beginning of those enormous tasks, which awaited us in front!

end section.

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ROAD OF COURAGE.

Rattled above the steppe spring brooks. High water from the Don took away ice. On the lashed severely by shells ground they flared up by the green flame of grass. Nature lived by its measured life. In the craters, where still stood the odor of trotyl and blood, appeared colors. Nature doing its job as before the war!

I walk with A. N. Tkachev and we consider, what to us, to Soviet people, brings its wings the second military spring. Gladness of new victory or the bitterness of retreat? Germans shout, that in winter you attack, in summer - we. Will we really again let initiative out of our hands? Enemy is still strong, he conducts total mobilization. For Stalingrad he intendeds to give revenge. Where and when will begin to thunder this decisive combat?

Path from Bobrov to Moscow is not close one. Sufficient time for speculations. Through the windows of passenger motor vehicle run by an infinite sequence of the smouldering ruins of villages and cities.

How much wealth, how much human labor is converted into the dust. In Moscow we went to call on the commander of GUVVR, General V. A. Golovko. He called a conference of the commanders of UVVR and some brigadier generals. It became necessary to share accumulated experience, and discuss our plans for the future.

Nightime Moscow environs met us with the hum of the anti-aircraft guns and with the lights of searchlights. Aleksandr Nikolayevich remarked:

- In the rear as at the front!

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The red light of signal lamp stopped motor vehicle. Check point. The Senior Lieutenant approached us, he verified documents, he managed before end of raid to place vehicle on the shoulder of highway under the camouflage net.

In the morning, tires rustled on the unusually calm Moscow streets, vehicle was stopped at the gate of a gray four-storied building at Ol'khovka. The Chief Directorate of Military Reconstruction Work of the NKPS here was placed. The corridors and reception room of General V. A. Golovko's are full of

commander-front-line soldiers. They registered, they learned the order of the work of conference, and were directed to the hotel of the central house of the Red Army. Conference was begun on the morning on 6 June. V. A. Golovko summarized our work in the past months, he noted good work, he indicated the deficiencies. With the special reports appeared the commanders for the controls of GUVVR.

After the second day of the conference, when I entered into the room assigned to me at the hotel, sharp telephone bell was heard. I picked up receiver. The secretary of the national commissar of lines of communication speaks.

- You are requested urgently to come to Peoples Commissar.

The area of commune is wrapped in evening twilight. Nowhere - not flame. It is unusual to see Moscow without the light. The trees of the former Yekaterina park appear dark, mysterious. Sadovo-Chernogryazkaya Street. Familiar building of people's commissariat. Wide semi-dark corridor. Glaring light of reception room. Secretary invited me into the office. Pressing to me hand, Peoples Commissar said:

- Urgent mission of government. Necessary to construct new railroad (ninety kilometers) from old Oskol to Rzhava. Kursk regional

committee provides twenty five thousand collective farmers at our disposal. In a month you will construct?

Mission not expected. Area relief is unknown. I collected my thoughts and did ask:

- Project of line has been developed?

- There is nothing. The requirement for this road arose literally yesterday.

- It means, the volume of works is not determined. My brigades are scattered along entire front. Is necessary time to collect them, to investigate track, to procure materials.

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I ask you to establish the period deadlines for line at minimum of two months.

Peoples Commissar here called to himself the deputy commander of GUVVR B. I. Levin. Three together we prepared the project of the solution of GKO. After transmitting project to the typewriter, Peoples Commissar said to me:

- The construction begin immediately. Give the necessary instructions on the telephone. On the spot establish efficient communications with the secretary of the Kursk regional party committee Doronin. He in everything will aid you. I ask you to understand that this mission is a party mission.

- I must lead many projects. They are all urgent:.

Peoples Commissar did become wary:

- What do you want to say?

- I ask you to assign construction commander of line the commander of the 19th brigade Colonel Tkachev.

- O.K. But consider, from you responsibility I do not remove.

I left the office stunned by the lightning-like character of what had occurred. Earlier I thought that such affairs preliminarily are investigated, they are discussed, are performed the necessary engineering economic calculations. But here incomprehensible haste! I was far from understanding the strategic concept of GKO and extremely

important value of this line.

From the reception room of Peoples Commissar I telephoned the headquarters of UVVR. I ordered Colonel Brykin immediately to go to the area of new construction, to direct there all our forces and supplies. In the hotel I woke A. N. Tkacheva, described to him about the obtained mission and his appointment as construction commander. Within half-hour Aleksandr Nikolayevich already entered to my motor vehicle and set off to Staryy Oskol. After the departure of Tkachev I was somewhat more calm. Beginning is made. But at the conference of General V. A. Golovko I was restless. The mission never left my mind. I listened to reports and presentations of comrades carelessly, I was unable to concentrate. Finally on 9 June conference ended. It was possible to leave. First of all it was necessary to visit in Kursk the first secretary of the regional committee of the party, Pavel Ivanovich Doronin. The direct route into Kursk is cut. Orel is occupied with Germans. It is necessary to go through Kastornoye. every hour was gold, and you lose here several days.

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I was aided by V. A. Golovko, who sent me to Kursk on his aircraft.

Kursk looked like a real front city. Broken, severe, with the

skeletons of houses licked by fire. Pavel Ivanovich Doronin met me affabley. He was completely into course of our mission and he already took the necessary measures for the rendering to us of aid.

- people begin to approach for the construction with in columns. The secretaries of the district committees of the party head columns. Direct guidance by people - is up to you.

Steppe in Staryy Oskol made noise of crowds. Unplowed fields showed multicolors of shawls and blouses of women, the bronze sunburn of the exposed soldier backs. It smellt of the grasses and the freshly-dug ground. A. N. Tkachev, V. S. Dmitriyev, S. V. Brykin, M. B. Yakhnovich met me. Brykin reported, that the works were started on two sides of tracks. Collective farmers from the more remote - not yet. Our battalions were almost all on the spot. Director - Colonel V. S. Dmitriyev, as the chief engineer of construction, introduced me to the basic aims of future project.

- Line to more advantageously to link, not to station Rzhav, but to Sarayevka. Length of the tracks was ninety five kilometers. Road profile more or less favorable.

Construction in the very complicated situation was deployed. The rails were old-suitable, different types. Attachments were

incomplete. Ties were not sufficient. There were no poles for the lines of communications. Was obtained the resolution GKO of 8 June. In it were confirmed the planned by us dates of the construction of line from 15 June through 15 August. Even before obtaining resolution we had time to make a test flight over future track on aircraft U-2 of our small aviation, to relocate several large subunits. On 14 June the bureau of Kursk regional committee VKP(b) and executive committee officially decreed to mobilize to the construction of the new main line 25 thousand regional workers and thousand carts.

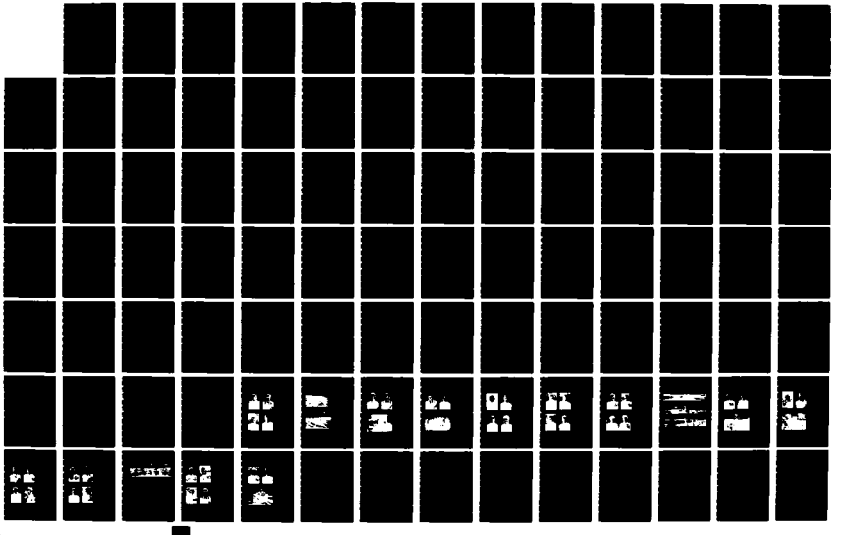
On the second day after my arrival for the construction from the morning on the track began to arrive new replenishment - women, adolescents, old men. They came on foot, on carts and hitch hiked, poorly dressed, half-starving, only recently released from under the Fascist yoke.

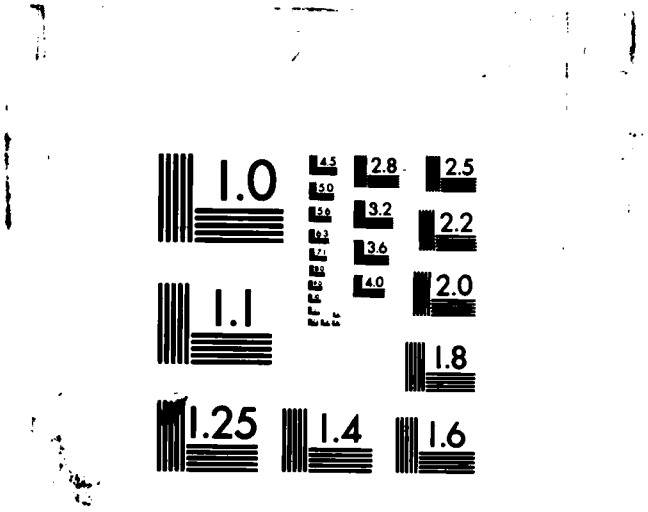
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Each has modest bundle with the reserve of food products and change of underwear. But mood in all was elevated, merry. Indeed they will build railroad for the native liberation army. Tamara Semenova led large detachment of girl-members of the Komsomol. On her head was red kerchief, face is tanned, weather-beaten, eyes shine with young fervor. She approached me and burst out without pausing for breath:

AD-A138 472 STEEL SPANS(U) FOREIGN TECHNOLOGY DIV WRIGHT-PATTERSON 5/8
AFB OH P A KABANOV 31 JAN 84 FTD-ID(RS)T-0527-83

UNCLASSIFIED F/G 11/6 NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

- Komsomol brigade has arrived for the construction of the road of victory.

- I see that the brigade is Komsomol, as for the victory, it must still be earned!

- Let us earn then, we do not doubt. Correctly I do speak, girls?

- It is correct ! - confirmed girls.

- More authoritative proofs is not required !

Girls laughed, and Tamara loudly gave an order to her brigade:

- March forward! Why be down hearted? Sing out our favorite!

Shovels began to thunder, rustled barefoot feet against the dewy morning grass. They began to sing all together harmoniously, sonorous: "over the valleys and the hills..."

Construction site with each hour was filled by people. The tent

posts, the huts, which resemble camps, here and there were stretched. Campfires began to smoke above the steppe. Provocative songs began to ring.

Engineers hardly managed to mark off the axis of track. They had only prepared sector, when they were at it with their shovels. There were no finished plans at first. They built on the instructions of engineers. The layout of tracks I assigned to the Voyentransproyekt [military transport plan]. So we named the groups of the designers for our administration. Its prominent specialist, experienced organizer I. G. Ogoyev was headed. It is necessary to say that the designers their mission managed rapidly and skillfully. They planned the minimum volume of earthwork and small artificial structures. Successfully was used under the new line subgrade of finished spur track from old Oskol to Kma station, named from the initial letters: the Kursk Magnetic Anomaly (now the station Gubkin). Length of this siding track was 24 kilometers. Was built the basic line of one-lane, according to the less rigid technical specifications.

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Its capacity was on 12 pairs of trains in a 24 hour period. Weight norm of train - 1000 tons gross weight. Station tracks were placed on 720 meters. The width of subgrade on the top, instead of those

established by technical operation instructions of 5.5 meters, were designed for 5 meters. Rails used were applied old ones, different types. Method of train communications - telephone.

Organizational period was especially difficult. Basic affairs - investigation and design, the procurement of materials and their delivery - were fulfilled simultaneously, in parallel.

What military value did have new line? Voronezh Front obtained independent main line. It emerged at the line Kursk-Belgorod and to the branch Rzhava-Oboyan', which by this time we had restored. New track freed from the delivery of cargoes an enormous number of motor vehicles, which transported everything necessary to the foremost front line for 250-300 kilometers. With the introduction of our route this distance was decreased by 150-200 kilometers. Was facilitated train work on the heavily overloaded main at that time Kastornaya-Marmyzhi-Kursk axis. Moreover, the Germans continuously bombed this main line and especially Kursk junction. New route gave the possibility to maneuver, to organize the circular one-way movement of trains along the march Kastornaya-Kursk-Sarayevka-Staryy Oskol route. This measure sharply increased the capacity of the main lines of central and Voronezh fronts.

Here it is desirable to say several words about the preparation

of our railroads for the war. Classicists of Marxism-Leninism always considered transport as the integral part of the economic development of any country and one of the most important means of its defense. Therefore transport must be prepared for the war is necessary persistantly, rationally, taking into account the contemporary means of destruction, tactics and strategy. V. I. Lenin taught: "...we require serious relation to the defense capability and the combat training of the country... beginning with the economic ascent of the country, with mending of the railroads (for without them modern war is the emptiest phrase) ..." [1].

FOOTNOTE [1]. V. I. Lenin. Complete collections of works, Vol. 35, page 395. ENDFOOTNOTE.

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It goes without saying, Soviet people under the guidance of the Communist Party and its government made giant work on the upsurge of the economy and transport in the years of the first prewar five-year plans. Our transport within this time was radically reconstructed. By 1940 the length of the system of railroads was increased in comparison with 1913 from 71.7 thousand kilometers to 106.1 thousand kilometers. Goods freight turnover within this time grew from 65.7 billion ton-kilometers to 415.0 billions. Three times as much cargoe

was transported on each kilometer of our railroads, as in the American and the English railroads. But behind these overall large indices hid shortages. We late, too late, began to reinforce the railroads of the western boarder areas of the country. In the first five-year plans the NKPS main attention was given to the main lines, which had economic value. Cargo flow there increased. Naturally, to reinforcing of these main pipelines first of all were given facilities. The roads of West and lines of strategic value were of no particicular concern then. On them the assignments of smaller dimensions were planned. The reader has seen, the difficulties with which we consequently had to contend during the first days of war during the retreat due to the absence of junction bypasses.

The commanders of the military communications of districts and departments of the transportation of the troops on the railroads knew about all these deficiencies and placed these questions before the appropriate echelons of command. But it is obvious that in the country as a whole were not sufficient means and forces. And thus now we in haste build Staryy Oskol-Sarayevka line.

The head sectors of new construction resembled a disturbed anthill. People dug out the earth, dragged it along - on the litters, in the wheelbarrows, in the aprons. Horses and motor vehicles were not sufficient. Tractors and the tools werw out of the question. The

most complicated and, perhaps, sole vehicles during the construction were pile drivers. They worked on the bridges, drove in piles.

We broke entire construction in two sectors. Appointed as commander of the first sector was deputy commander of the 19th brigade, Engineer Colonel P. K. Kuleshov; the second - commander of the 7th brigade Colonel N. I. Novosel'skiy. Under the command of Kuleshov they put the 19th brigade, the 22nd battalion of the 8th brigade, forward repair train No 7 and front autobat [M-T battalion?].

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In the second sector they worked: the 7th brigade, forward repair train No 19, truck battalion. The civilian population was distributed between the sectors. On its shoulders lay the most labor-consuming part of the works - ground, the subgrade. Military subunits and special-formations built the bridge, laidtracks, ballasted it, errected technical buildings. Water-supply points on the entire tracer were built vodrem No 13, communications were laid by - svyaz'rem No 10.

From the first day we established rigid control of the execution of goals by each subunit, each column. At the end of the day we

together with A. N. Tkachev and V. S. Dmitriyev examined the reports of brigadier generals and commanders of columns, discussed them, revealed the lagging sectors, planned measures to pull them up. Numerous troubles to us delivered rails and attachments. Their delivery was arranged. Also in short supply was equipment and pipes for the water-supply points, cables and communication equipment. Everything had to be knocked out laboriously, transported hundreds and thousands of kilometers. Supply workers could not be found. But nevertheless we were sure that we would build the line in two months. For two months were oriented all people. Suddenly they entrust to me the telegraph message of Peoples Commissar. I read: "This evening report your propositions on the rendering of aid to the construction because of the need for shortening the period of construction to 35 days". I transmit telegraph message to Tkachev and Dmitriyev.

- prepare the report for Peoples Commissar !

I emplane and fly into Rzhava, to the headquarters of front. It is necessary about the new period to immediately report to military council. I go to Leonid Romanovich Korniyets, I report about the order of Peoples Commissar - to decrease the period of construction by almost two times. Leonid Romanovich inquisitive looks at me. I see that he knows of the affair. After listening, he twists his magnificent moustache, he said:

- We can in no way aid. Settle on a new period. Road, as air, is necessary to our front. Yesterday comrade Vatutin was called into Moscow, to the General Staff, on operational questions. In the conversation with Stalin, Nikolai Fedorovich raised question about the acceleration of the construction of front main line. Stalin supported his request. Here he gave instruction to Peoples Commissar of railroads to construct line in thirty five days. Now you know, whose mission this is?

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Leonid Romanovich reminded me that the Voronezh and central fronts proved to be in the very difficult situation with the procurement of cargoes. At their disposal there is only one railroad main line Kastornaya-Marmyzhi-Kursk. But even it is incompletely restored. In a 24 hour period not more than 16 pairs of trains are capable of passing. Of these for the Voronezh Front only 3-4 lines of graph are designated. Eight armies are based ON THIS LINE. FIVE armies of central and three of Voronezh fronts. Our line is intended to relieve situation.

Korniyets took pointer and approached the large wall map of the

Soviet Union.

- And what have available the fascists? Three lines, going to the theater of combat operations, pointer was aimed at Kiev and slid from it to the east in the direction of Kursk.

- here are these three lines: Kiev-Konotop-Lgov, Bryansk-Orel-Ponyri and Kharkov-Belgorod. They all work at complete prewar power.

I thought to myself: it is obvious, preparation for the new general offensive occurs. To ask about this of Korniyets I did not dare. Yes, even he himself is hardly privy to secret thoughts of the highest command element.

But most of all me harassed the new deadline of the construction of our railroad. How will we meet it, reform entire operational procedure? Where so rapidly we will get the necessary materials? The NKPS must supply us with them, it answers to the government for the construction of line. But the NKPS does not have free resources. The command element of front will not aid us with materials. But it must know about our needs. And I reported to Leonid Romanovich about all our difficulties, asked him to ask about designating for encouraging of soldiers, sergeants and civilian population goods, tobacco, candy.

Here L. R. Korniyets got from the VCh the number of the telephone of the commander of the rear of the Red Army A. V. Khrulev.

- Andrey Vasilyevich, builders of line Staryy Oskol-Sarayevka ask to aid them with goods, tobacco and candy. Yes, for the encouragement. Good, I will now ask Kabanov.

And, turning to me, Leonid Romanovich did ask:

- Besides goods, two tons of tobacco and two tons of candy with you will be sufficient?

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I did not expect this generous gift and said happily:

- Is sufficient, thanks!

From Rzhava I flew to the construction headquarters to the future station Chaplyzhnaya, where gathered for a conference the heads of construction, political workers and the secretaries of district committees. I reported to them about the new deadline for line.

Construction commander A. N. Tkachev reported about the measures, developed for the report to Peoples Commissar. Main emphasis was on the fastest delivery of the materials of superstructure of track, and also ballast.

After conference, losing not minute, all participants were directed to their subunits and columns. I again attentively examined the prepared by A. N. Tkachev and by V. S. Dmitriyev plan of my report to Peoples Commissar. I introduced my corrections into it and transmitted report to telegraph. Response in the morning was obtained. Peoples Commissar permitted to us to remove rails and ties from the alternate path in the sectors Rzhava-Belgorod and L'gov-Gotnya. The procurement of ballast was assigned to the 25th brigade of Lieutenant Colonel S. G. Silkin. For this it was taken from the railroad troops of Bryansk Front. Other insufficient materials they promised urgently to deliver. Telegraph message concluded with the words: "I desire the success in accomplishing the mission of the GKO"!

At noon on the construction site P. I. Doronin arrived. He attentively inspected the front of operation, he had a talk with the secretaries of district committees, the inhabitants of region. Stayed Pavel Ivanovich several days. During this time he helped to fix mass-political work among the population, organized for the builders

the demonstration of motion-picture films, concerts and even plays. Continously was conducted the political educational work, also, in our subunits. Combat leaflets, wall newspapers regularly emerged. The regional and our front newspaper "For the Rout of Enemy" regularly whole pages and issues devoted to construction, and its people. Communists and Komsomol members served as an example of the selfless labor. Initiators in the competition were the Komsomol brigades of Tamara Semenova, Aleksandra Severina, Nina Podtekhina, Dmitriy Mikhalev, Galina Dekhtyareva. All komsomol youth brigades numbered 130. They, as a rule, fulfilled their daily missions by 180-200 percent.

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The flow of those desiring to work on construction did not run low. Soon the number of local residents 25 thousand people. People went voluntarily, they went to aid the native Soviet regime, to conquer hateful enemy. All worked conscientiously, without knowing fatigue. To sleep and to consume of food minimum time was devoted.

On one of the days I visited the sector of the 60th battalion. Battalion commander Major V. Ya. Timofeyev reported:

- Entire personnel of battalion, including headquarters clerks

and typists, on the track! We fulfill daily missions by one hundred fifty percent.

I focused attention on the slogans, written with paint on boards and on the sides of many wheelbarrows: "honor and praise to the foremen of military norm"! "At the front each hour counts! Let us fulfill in time the operations order"! "Our construction is the path of shell into the nest of Fascist reptile"! "Increase work pace - The gun crew awaits shells!"

I do ask the deputy commander of battalion on the political unit Major Yu. I. Luk'yants:

- Who did compose such slogans?

- People themselves!

These were not simply words, but the call of the heart of each person, his oath to the party and to the native land!

Aid to us in the organization of work for the construction arrived from the Chief Directorate of Military Reconstruction Work, the deputy commander of the railroad forces, the General A. Ye. Kryukov. Experienced engineer, expert in transport, Aleksandr

Yevdokimovich spent whole days on the line. After seeing me near the posters, he did approach and, pointing to the slope, did ask:

- What are you doing?

I immediately did not understand the meaning of his question and answered:

- Reinforce slope with turf.

- I see! Why you do waste work force on such finishing touches?

- Habit to make good-quality.

- Let's apply the trimmings after victory. Now is war, we have little time, it is possible to manage, also, without turf.

We were so absorbed by our construction that not all noted, when and how occurred the troop concentration for the powerful strike against the enemy.

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Early in the morning on 5 July the hum of guns shook steppe. "Really

has begun the expected offensive of Voronezh and central fronts? - I thought. - And the construction of line is not completed. It means, we are late" ! In a flash I dressed, jumped out from the tent, went to the track. Work there already was in full swing. Familiar elderly collective farmer, Nikolai Tikhonovich Potapov, rolled wheelbarrow with the earth along the boards. I did stop him, I do ask:

- What do you think, old timer, are we not late with our track?

- This combat was not begun in one day, Pavel Alekseyevich! Strength on our part is unprecedented. We may fall in battle, but we will build the road in time !

All builders caught soon these words and they declared strike front five-day week. In the competition local citizens and our soldiers were included. For the superiority in the labor of column with column, battalion with battalion, soldier with soldier competed. The columns of Belov and Volokon areas achieved production for each person up to 6 cubic meters of the ground with norm 3.5. Among the soldiers the dual overfulfillment of daily missions became ordinary. But combat on the Kursk arc with each day were intensified. The hum of guns approached, it became louder. Germans from the single raids on the construction line went to mass raids. Enemy tried to interrupt or to inhibit our construction. At the first upon the appearance of

Fascist aircraft of women and adolescents threw down work, they scattered to the trenches. But the fire of our antiaircraft artillery did not make it possible for pirates to aim their deadly cargo, and it scattered the combat formation of enemy. Bombs fell anywhere. Local residents grew bolder, they stopped waisting time on scurrying for cover.

On 17 July, 1943, line was roughly ready, and we opened the temporary movement of trains along it. For the railroad troops of our front this was the first large construction since the beginning of the Great Patriotic War. We introduced every day on the average of 3 kilometers of finished track. For that time, with manual labor, these were high rates. The labor spent on each kilometer was 4600 man-days. Certainly, this is almost 8 times more in the comparison with the contemporary mechanized mode of operation, but we were glad that we had it. The construction of line was completed on 3 days earlier than the established date - in 32 days instead of 35.

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Of earth alone they overturned a mountain - 800 thousand cubic meters. Errected 50 artificial structureswith a by total extent more than 700 linear meters, laid 164 kilometers of main and station tracks. They reconstructed branch with the length of 24 kilometers.

Voronezh Front obtained its independent main line.

On readiness of line I immediately telegraphed to the NKPS. For the report to the military council of front from Staryy Oskol I flew by aircraft to Rzhava. The member of military council General L. R. Korniyets met me at the doors of his office, paternally embraced, kissed and asked to transmit the commendation to all builders on behalf of the front command.

- Fine people, they gave us a spoon for our dinner !

During the same day for inspecting the track the commission of the NKPS arrived. As was stipulated, commission attentively inspected track, each installation, wrote down imperfections. We did not have time to fill track with the second layer of ballast and to complete completely the construction of technical buildings. In spite of this, in its document on acceptance and implementation of line, commission the quality of construction evaluated as "good". Filling of the second layer of ballast and completion of buildings we did in the process of operating the line.

For labor heroism and courage the Presidium of the Supreme Soviet of the USSR awarded 306 builders orders and medals. I was awarded the Order of the Patriotic War of the 1st degree, A. N.

Tkachev - Order of Lenin. Our labor contribution to this victory so highly was evaluated.

In all to our forces, which operate on Kursk projection, the country supported from March through August 1943 540 thousand cars of different cargoes. For the execution of such transportation the railroad workers used 90 percent of entire available at their disposal working motor pool of cars. Trains were almost under the continuous bombing. With particular bitterness Fascist aviation bombed the units and the Kursk stations, Shchigry, Uzlovaya, Yelets, Marmyzhi, Kastornoye, Valuyki, Liski. Hitlerites persistently tried to destroy railroad bridges. Three times they accomplished the massed raids on the bridge across Turdaya river on the Turdaya-Karasa stage. Four times - to the bridge across the river Tim. From April through June 1943 on the main line of central and Voronezh fronts Fascist carrion vultures conducted more than 120 raids, dropped about 4400 bombs.

German command element posed the problem to its pilots of erasing from face of the earth Kursk junction.

It seemed that the junction and station were completely

destroyed and cannot be revived to life. But every time they were revived. They withstood 12 massed attacks of Fascist aviation. Thus, in the daytime on 2 June and at night on 3 June the bombing of Kursk with small interruptions continued 22 hours. Within this time German aircraft dropped 1600 bombs on the junction. In this raid participated 824 Fascist aircraft. Were destroyed 12 kilometers of station tracks, locomotive depot, reservoir buildings, many points and crossings, 154 loaded cars even 8 steam locomotives, 300 spans of communications line. The junction lay in the ruins:. but local railroad workers, soldiers and officers of the 77th track battalion of Major P. I. Korshunov of our 5th brigade of Colonel P. I. Bakarev then appeared.

After 11 hours 30 minutes they straightened up the mangled rolling stock, laid tracks and fot the trains folling. 35 hours were required in order to remove the after math of bombing. Unprecedented courage and labor heroism were revealed. The native land highly evaluated the feat of railroad workers. The commanders of Kursk P. A. Shubin station, Colonel P. I. Bakarev and Major P. I. Korshunov during November 1943 were awarded the high rank of Hero of Socialist Labor, many railroad workers were rewarded with orders and medals.

As is known, battle near Kursk is divided into two periods. In the first period the forces of central and Voronezh fronts exhausted

and bled white the enemy in the defensive actions and created conditions for the counteroffensive. During these days the Hitlerites only in the individual sections were wedged into our defense from 10 to 35 kilometers. Taking into account this circumstance, we were barely able to place obstacles. At our front in the area of combat there was only the 31st track battalion of the 19th brigade. On the order of the commander of VOSO of army on 5 and 7 July it partially destroyed the Belomestnaya and Prokhorovka stations and one stage between them.

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The second period - counteroffensive, in which the troops of Western, Bryansk, central, Voronezh and steppe fronts participated, was begun on 12 July on the Orel direction and also on 3 August in Belgorod-Kharkov. On 5 August were liberated Belgorod and Orel. On 23 August with the release of Kharkov, Kursk battle was completed.

Retreating, Hitlerites with the particular bitterness destroyed railroads. They almost completely rendered inoperable line Verkhov'ye-Orel-Bryansk. Subgrade and the stations of this line fascists stuffed with thousands of mines of different systems. Delayed action mines were calculated for 17-20 days. Their explosion had to occur after the restoration of main line. Charges of up to 350

kilograms were installed to a depth of 2-3.5 meters. Miners with the risk for the life cleared main line.

Immediately after the release of Belgorod, commander-in-chief of forces of steppe Front, General of the Army I. S. Konev, requested the NKPS to restore in 7-8 days 50-kilometer Volcansk-Belgorod railway divisions. Restoration of this line gave the possibility to steppe Front to move out to the main line Belgorod-Kharkov. At this time I had been commanded by the military council of Voronezh Front to make sectors of Belgorod-Gotnya-Vorozhba and Belgorod-Kharkov operational. These sectors underwent extensive damage. We developed the plan of their restoration. Forces for the execution of the command of the command element of Voronezh Front and request of General of the Army I. S. Koneva were insufficient. But in the sector Volchansk-Belgorod were located our 14th bridge and 9th track battalions of the 19th brigade. This facilitated the execution of the target of steppe Front.

With the report to the military council on the draft of the plan of the restoration of front main lines I mentioned the request of I. S. Konev. After hearing this, a member of the military council of front, General N. S. Khrushchev, did ask in me:

- So, you have reserve forces?

- No, we do not have sufficient.

- Then why you do sneak into another's vegetable-garden?

- We are obligated to aid steppe Front. To refuse them will be on our part not according to state regulations.

- That means, that I am less a state person, than you!

- But the steppe Front does not have its own railroad forces.

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- I order to remove battalions from the Volchansk sector and to move to the line of Belgorod-Vorozhba, said Khrushchev.

But while conversations and coordinations occurred, battalions already deployed works in the Volchansk sector. To remove them was clearly not expedient. I reported on the telephone to Peoples Commissar of communication lines about N. S. Khrushchev's position. Peoples Commissar promised to discuss it with him and to settle affair. On the second day after this conversation to us the commander of the main administration of the railroad forces, General V. A. Golovko, arrived flying with a group of commanders. He gave official instructions: battalions from the Volchansk sector not to remove and urgently to restore it, which we did.

The 7th brigade restored main pipeline from Belgorod in Kharkov. It restored the track in the wake of the advancing troops. Serious obstacle on the path of motion of trains was the bridge exploded by Germans across Lopan'river not far from Kharkov-sorting station. Its

restoration was assigned to the bridge restoration detachment No 2 of I. Yu. Barenboym. During those days the members of the government of the Ukraine visited the construction of bridge. They became acquainted with the project, the operational procedure. They thanked I. Yu. Garenboyma for a good organization of operation.

In the environs of Kharkov our troops met with persistent resistance of Hitlerites. The rates of advance were lowered. This allowed us to restore track in time. On 23 August Kharkov was completely liberated, and within 5 days, on 28 August, to its passenger station the first train arrived.

Among the first railroad subunits to enter Kharkov was the bridge restoration detachment No 2, which by this time had restored the bridge over the Lopan'.

Kharkov railroad junction is one of the most complex ones in our country. It has a large number of bridges, overbridges, triple intersection, many stations, different points of on-loading and unloading the cars. To become acquainted with its system is very complex. Fortunately, at this time in our directorate was the commander of southern railroad, Hero of Socialist Labor, S. V. Kutafin. He even before the war worked here as dispatcher, and then as the commander of this mainline, he excellently knew junction and

track. Moreover, in UVVR-3 served engineers from the transport planning organizations of Kharkov and Kiev.

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Together with Kutafin they developed a plan for the restoration of junction in stages.

Germans had destroyed junction solidly. Besides overbridges and bridges they exploded all water-supply points, depot, coupler and signalling, passenger and technical buildings. Station tracks and points and crossings lay mangled, chopped by trotyl. To the hump yards at the Osnova station - there was no access. But our problem was ensuring rapid passage of trains on main tracks. This is the first priority. With respect to expense they were basic. To cut trail anywhere in the jungle is easier than to lay track among this chaos.

However, situation required as soon as possible to give access to trains to Kiev, Lyubotin, Poltava and Kremenchug. The troops of Voronezh Front advanced to Kiev, toward Poltava and Kremenchug steppe Front was aimed. Therefore in the readiness of track in the direction of Poltava were interested both fronts. But to restore junctions by combined efforts we not could. During these days by the resolution GKO with the steppe Front was only created its administration of

railroad troops (UVVR-14) As its commander was assigned the commander of the 19th brigade Colonel A. N. Tkachev.

For the organization of the new administration, the selection of cadres, the freeing for it of the troops and special-formations a certain time was required. Therefore entire burden of restoration of Kharkov unit lay on the shoulders of UVVR-3 brigades. To revive junctions we directed the 7th brigade. Its commander, Colonel N. I. Novosel'skiy, and chief engineer Lieutenant Colonel V. D. Gal'kevich immediately organized mine clearing of targets and their technical reconnaissance. Designers began their calculations.

The bridge builders of the 7th brigade began the restoration of the well known Sverdlovsk overbridge. That same overbridge, where Mohammed Karayev with the unfading glory covered himself during the retreat of our forces. This structure connects Sverdlov street with Kholodnaya Gora street and intersects the tracks of Kharkov passenger station . But exit from the passenger station encumbered the second Goncharovskiy overbridge. On it occurred the movement of trains in the direction of Merfa and Osnova.

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Blown up lay span structure, abutment and intermediate "bull". The

bridge builders of the 2nd battalion of I. Yu. Barenboym's detachment commissioned this structure. Here on the cleanup of road for the motor transport were especially distinguished soldiers Afanasiy Marichev and Pavel and Stepan Merkulov (not brothers). By the piece, by the chunk, working without rest many hours, they dismantled obstruction, until they cleared road.

Without losing time, started to clear territory for piling the track soldiers and officers of 62-nd and 68-th battalions. Works were led by the battalion commanders - Major A. I. Tsaplin of the 62nd, - Major M. Ya. Kozhevnikov of the 68th.

For the piling into the track we used the damaged rails, first chopping off ends and boring in them holes. This work is complicated and is very labor-consuming. But the soldiers of the 7th brigade were trained in this. Work succeeded. Deftly they chopped and bored rails Privates I. Shantarenko, N. Degtarev, K. Tuktarov, I. Stepanenko, P. Shmatenko. Daily by up to 50 and 100 percent they exceeded norms. After conferring with the commander of political department, they decided to encourage front-rank workers - to award them engraved watches. Commander Major M. Ya. Kozhevnikov organized people. After thanking personnel for the intensive work, I announced order about the rewarding of most outstanding. First, clearly defining step, toward me it approached tall, broad-shouldered soldier Ivan

Shantarenko. Receiving the decoration he said:

- I have pledged each day to work for two, to exceed norm two times.

On the construction site awards were made to the front-rank workers of the 62nd battalion by Major A. I. Tsaplin. During those days there was not one soldier-railroad worker, who would not fulfill his norm.

On 30 August we opened through movement to trains along through Kharkov junction. The first stage of restoration works was completed. The armies of Voronezh Front irrepressible went to Dnepr. It was necessary and to us to keep up with them. By this time the 14th brigade of Colonel S. I. Ivanov prepared track to Lyubotin and Poltava. There we transferred the battalions freed in Kharkov. The 19-th brigade prepared sector Belgorod-Gotnya-Vorozhba. Colonel V. S. Miridonovnow commanded this brigade. He was experienced engineer-bridge builder, pupil of military transport academy, cadre commander of the Red Army, and he created a path between the soldier and the brigade commander.

In 1941 Miridonov served in our brigade as chief of staff. Then he was the commander of the 17th brigade. To us they transferred him again after reorganization at the Bryansk Front. There he commanded the railroad troops. We with the gladness accepted Vasiliy Sergeyevich into our collective.

On 31 August together with brigade commander S. I. Ivanov I inspected the restored sector of track in the direction of Lyubotin. All around were the burned out settlements, the destroyed bridges and station. Under the embankments disfigured cars and steam locomotives had tumbled. No mtter where you look - everywhere crater, trenches, barbed wire, reinforced-concrete pillboxes. Suddenly in front flickered red flag - stop signal. Hand car slowed. We emerged, we do ask a soldier-signalman:

- What is the matter?

- Comrade General ! We deactivate a mine of delay action. I ask you to wait !

All around - not soul. Above the station hot August wind churns columns of black dust. Station area is studded by the pieces of the exploded rails. Before me the stumps of points and crossing project. But there near the weighing track we noted girl in the military

uniform. Squatting, she raked the ground with hands. Wind blew about-light brown hair which strayed from under the overseas cap. Upon the instruction of the soldier who had stopped us we withdrew behind the ruins of passenger building. We observe. Seconds seemed an eternity. Finally girl rose. In her hands was a metal box - timing device of mine. The mine specialists approached us, and reported:

- Sergeant Belokon' ! I have rendered harmless the delayed action mine !

I did ask:

- Who did permit you to be occupied with such a dangerous, man's work?

- No one ! I decided to become mine specialist and I became one ....

She offended looked on us, pressed beautiful thin lips and asked permission to continue her work ....

Several stages flashed by. Hand-car (line-inspection trolley) stopped. Further track was not yet restored. On the bed, shoulder to shoulder with the soldiers worked women, adolescents, old men.

Noon-day silence was broken by the knock of hammers, the clank of shovels, the gnashing of metal.

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The chief of staff of the 7th brigade, the former commander of the 9th battalion, Major I. V. Sytnik, approached us. After receiving report, I asked him:

- why did you let sergeant Belokon' in mine work! Not women's work. Dangerous !

- We did converse with her, comrade General, we tried to dissuade her and she did reiterate one thing : A to be sniper, pilot, scout in the rear of enemy - female work, is not dangerous"? Her reasons were so convincing that we could not refute them.

Sytnik described that Belokon' was unusually persistent and daring. She by nights read the books, studied mine affair. The commander of the platoon of miners, Senior Lieutenant Bochek, and the commander of the group of scouts, Lieutenant Foyda, helped her. By the way, Foyd is the fiance of Vera. They are contemporaries. Recently we noted their nineteenth birthday.

Now Vera Antonovna Belokon' - is the wife of Adam Yevlampiyevich Foyda. They live in Sumy. They teach in the secondary school of children. They have reared two sons.

During these days the troops of the right wing of Voronezh Front conducted furious fighting for Sumy. Near the Sumi was a large bridge across the river Psel. Reconnaissance reported, that it was not completely destroyed. Of seven span structures four, located nearer to the right shore, occupied with enemy, were intact. It is undoubted, that Hitlerites, retreating, will not leave us in tact these spans. They will explode them. The sector of track was located in the zone of action of the 19th brigade. For the rescue of the surviving elements of bridge, the brigade commander Miridonov designated special group of 35 people. They assigned captain I. A. Borzova as the commander of group. Secretly soldiers approached the river. The bank was under the mortar fire. Borzov deployed his people behind the embankment. Soldiers dug trenches, set up machine guns. Commander himself with several soldiers inspected bridge, made the necessary measurements.

But Germans detected Borzov, began to fire. Soldiers, who dug in behind the embankment, covered the commander with the machine gun and submachine gun fire. Skirmish developed. Day was sunny. The commander of pile driver platoon who remained after Borzov, the senior officer

of group, Senior Lieutenant Telyushenko, noted that on the opposite shore of river, in the trenches of Germans, something flashed.

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" Must be - binoculars", he thought. Soon Telyushenko saw the German officer who was observing the detachment with binoculars. He took aim like a sniper and from his rifle he shot. German fell into the trench and appeared no more.

They brought food to detachment only at night. In the daytime to approach its positions it was impossible. Germans fired on bank. Several times they attempted to approach the bridge. But every time detachment returned their fire. The skirmish continued three days.

At dawn on 1 September, 1943, in the South and North outskirts of city Soviet artillery sounded. Combat for the city continued entire day. Night came unnoticed. Calm dense darkness enclosed river. Muted cannonade from a distance could be heard. River breathed autumnal coolness. Soldiers, alerted, looked intently into the dark, they listened to each rustle. But the right bank of Psel was silent. Suddenly near the undestroyed supports something crunched, it fell into the water. Captain Borzov immediately gave the command:

- Fire !

Shots burst out. Enemy did not answer. However, "what happened"? - thought captain. He gave the command to cease fire and to increase observation. Detachment again listened attentively and looked intently into the dim autumnal night. Suddenly from the right bank was given the loud cry:

- Comrades Red Army men, do not fire ! I am steam locomotive engineer from the Sumy depot Semen Kovalenko'. The beasts have gone, cross over to our side without fear !

- Provocation or truth? - asked soldiers captain Borzov.

Voice sounded sincere, convincing, with the melodious Ukrainian accent. Soldiers looked more closely. The man moved out in an open place, he did not hide. Before the bushes of osier bed, above the water, his figure loomed. They asked Kovalenko several questions. He answered them.

- Ours! - were heard several confident voices.

From ties they tied a raft. So that it it would not be swept away by the flow, they tied raft to cable. Soldiers on the bank held

to it. Onto the raft jumped captain Borzov and two submachine gunners, who were prepared for combat. Raft moved to the opposite shore. As soon as Borzov jumped onto the bank, engineer ran up to him and began to embrace him.

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Along Kovalenko's jaws the tears flowed. When Kovalenko calmed down, he reported:

- I am recently from the station. About thirty Germans load some goods onto trolley with trailers. Let's go faster or they will leave !

- we will not have time, to the station indeed far ! - said Borzov.

The remaining soldiers of detachment meanwhile to the right shore crossed. They broke into a run. Kovalenko told on THe run:

- An Ober-Lieutenant was wounded into the eye. He is hardly breathing. Germans say that he the day before yesterday in the daytime caught your bullet ....

Captain nudged with his elbow Telyushenko who was running next to him:

- Your work !

At dawn the detachment entered to the calm uninhabited street of railroad settlement. Kovalenko yelled with entire power of his lungs:

- Ours have arrived, hurray ! Long live the native Red Army !

To the cry jumped out half-asleep women, children, old men. Street instantly revived, and was filled by people. Enormous crowd moved after the detachment to the station. There no longer were there Germans. People rejoiced. Each as he could, expressed his gratitude for the release to soldiers and commanders.

After two hours at the Psel banks the 14th battalion arrived. It immediately began the restoration of the destroyed parts of the bridge. On 3 September we heard on the radio report of Soviet Information Bureau, that the troops of the Voronezh Front on 2 September freed Sumy.

After 5 days, on 8 September, the bridge across Psel river was restored and to Sumy station our first trains arrived.

Meanwhile the troops of Voronezh Front rapidly advanced to the Kiev axis.

On 21 September the in the evening the forward large formations of Voronezh Front moved out to the Dnepr west of the Pereyaslav-Khmel'nitskiy. The troops of steppe Front broke through the defense of the enemy on the intermediate lines and on 23 September they freed Poltava.

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The restoration of mainline from Poltava to Darnitsa became the most important problem of the railroad troops of front. In Poltava over the Vorksla - was a large bridge. It had to be restored by the moment of readiness of Kharkov - Poltava line. We entrusted this job to I. Yu. Barenboym's detachment. Assigned to help him was bridge construction train. On the streets of city combat still occurred, and our bridge builders already cut piles on the shore of Vorksla, and installed in the river pile drivers. For the introduction to the restoration of entire main trunk line GKO established rigid period - 25 days. The length of track is more than 350 kilometers. In order to lie within this period, we each day must lay 14 kilometers of finished track.

And this together with the bridges and the stations, and there were more than 40 of them! For the restoration we decided to deploy all three of our brigades and special-formations. They sectionalize entire tracer. Restoration of sector from Poltava to Romodan was entrusted to the 14th brigade, to gorem [advanced mobile repair train] No 7 and to svyaz'rem [railway communications repair train] No 10, from Romadon to Grebenka - to 7th brigade, to gorem No 19, part of the forces of the 14th brigade, and to gorem No 7. Sector Grebenka - Darnitsa was assigned to the 19th brigade and to gorem No 7, to svyaz'rem No 14. The water supply of entire trunk line was provided by vodrem [repair train of water-supply installations] No 13.

Bridges were required to be placed on the rivers of Vorksla, Psel, Khorol, Sula, Sukhoy, and Trubezh.

The fate of the bridge over the Khorol in Mirgorod destroyed by Germans troubled me. This bridge is one of the large ones on the main trunk line. It must be restored first of all, otherwise will be detained movement along the entire road from Poltava to Darnitsa. I called to itself brigade commander Colonel N. I. Novosel'skiy, commander of the 33rd battalion and A. YA. Daina and assigned to them mission of restoration of Mirgorod bridge. On the map they outlined the march route of the movement of battalion. In order to reach Khorol river in Mirgorod area, for our people about 200 kilometers

were necessary to cover actually in the rear of enemy. Indeed the troops of our Voronezh front still pounded in these regions the strong points of Germans. They had agreement about coordinatiion. For training of people, on-loading of equipment, instruments and materials days were allowed. Motor vehicles were not sufficient, and some of the people prepared to make this trip on foot.

Next day the battalion moved out for the execution of mission. In front moved combat, which also served as technical, reconnaissance unit commanded by the assistant to the commander of the 33rd battalion of technical section, engineer major A. E. Desov.

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For reconnaissance on operations group followed on two cargo motor vehicles and pick-up. To the motor vehicles they loaded pile driver, geodetic and carpenter instruments. Commander A. Ya. Dain went in the head vehicle, S. V. Loyenov, zampolit [political officer], - he brought up the rear.

They passed the night in the village of Perepalovka. In the morning they went into the village Oposhnya, which is located to the north of the farmstead of Dikan'ka known from the writings of Gogol'. On the approach to Oposhnya the Germans, after noting column, opened

on it mortar fire. Fortunately, everything turned out well. Battalion did not sustain losses. Soon column intersected (fixed) Fascist reconnaissance aircraft and directed the "Junkers." Toward evening they reached the Kholodnaya Badka station. They spent the night in the village of Shimki. Here the group of technical reconnaissance not long before the approach of battalion maintained combat with the Germans escaping from the encirclement in the environs of Poltava. They appeared from the direction of the village of Portyanka. Our reconnaissance took up defense on the outskirts of village and, having suddenly opened fire it routed the fascists.

In the morning column passed through the town of Velikaya Sorochintsa. Here everything resembled the immortal Gogol narrative. Across the river Perevnya was a decrepit highway bridge. Dain stopped motor vehicles and joked, indicating the bridge:

- It's Gogolian ! Why wouldn't it bog down !

They inspected doubtfully the structure, they ascertained that the piles were strong. They released the first vehicle. It passed ! After it proceeded the rest. On the line many crossings proved to be mined, bridges destroyed. Mine specialists and carpenters had to work.

On the third day we arrived in Mirgorod. Even before the arrival of column engineer major A. E. Desov with his group produced technical reconnaissance of bridge. Length of bridge was approximately 80 meters. To restore in short was impossible. They resolved to errect a temporary (next to the destroyed) bridge, on the piles with the wooden packages. They turned for help to the local residents. More than 350 people arrived to help. Desov entrusted them with filling approaches to the bridge. Thus, before the arrival main forces of battalion works were already started. On the spot some building materials were found. But there was no main thing - wood. And local residents again aided. Dain was approached, by an elderly Migorodian who worked in pouring of mound:

- Near the villages of Kabintsy is a good oak grove.

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Maybe, it will prove useful to you.

- Far from here?

- About twenty verots [verot=3500 feet] or more !

- How much more is more?

- Not much. Two-three versts, not more.

Commander with his assistants of villages into the pick-up went into the village of Kubintsy. Oak grove proved to be excellent. More than one generation of peasants had grown it. To chop it down was sad to the point of tears, but it had to be done. They called people, explained, where the forest was needed. Soviet people themselves moved out with the saws, axes, and supplies to aid the builders. Entire night knocked axes, rang saws in the beauty to oak grove. Supplies with the oak logs in the morning carts with oak logs stretched all the way to Mirgorod. It was hard for the carpenters to cut them. They chopped with axes as if on iron. They gathered metal for the clips and the bolts in the smithies of surrounding villages.

When works were already drawing to a close and there remained only to lay guard beam and to place rails, commander at night woke the duty commander:

- Comrade Major ! The bridge the steam locomotive with a tower crane approached. Machinist communicated the order of the General of Kabanov to urgently direct it toward Lubna, to Sula river !

- Where's Desov?

- On the bridge !

Dain thought. Bridge is not yet rolled, and steam locomotive with the crane is heavy. But commander did not doubt the durability of bridge. His structures were oak, strong. Dain decisively clinched onto the steam locomotive and gave an order to the machinist:

- Slow, forward !

When crane entered to the bridge, Desov it inspected it and ascertained that everything was in order. Dain ordered machinist to continue. Thus the Mirgorod bridge was rolled (broken in). On 9 October we made it operational early.

Why was such haste with the transportation of a crane? After the restoration of the Vorksla bridge in Poltava bridge detachment No 2 began the installation of the bridge across Psel river.

The bridge over the Sula at Lubna was built by the 60th and 62-nd battalions, commanded by the Majors V. N. Timofeev and A. I. Tsaplin. The length of the bridge was 209 linear meters, six spans.

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Was built new bridge on bypass, next to the destroyed bridge. There were no lifting mechanisms, the tower crane was occupied on the Psel bridge. Therefore instillation of of the span structures on the supports prepared from the H-beams, proved to be very labor-consuming and complicated process. The chief of staff of the 7th brigade, Lieutenant Colonel I. V. Sytnik, proposed to use two barges. On them were constructed the special frames, to which then the trusses were placed. River in the place of works was divided into two channels. In the first channel the rolling of span structures onto the supports occurred without incident. In the second - one of the barges did not hold, and it was destroyed. The metallic beams with a length of 23 meters fell into the water. To roll span structures there remained nothing. A rower crane was needed. Then I ordered after the restoration of the bridge across Psel river to immediately move crane to Sula. There was only one tower crane. We had no other lift facilities. They thus and moved it almost continuously from one bridge to another.

Accident to two days delayed the restoration of Sula bridge in Lubna station. But this was not reflected in the readiness period dof entire main trunk line from Poltava to Darnitsa.

After the liberation of the enormous territory of the Ukraine (from Poltava to Dnepr) it was not easy for us. Units operationally were transported from the project to the project. as the saying goes, there was no time to take a ride. For example, 33rd battalion did not have time to errect Mirgorod bridge, before it received a new order: urgently to relocate into the Darnitsk forest and to begin there procurement of wooden structures for the Dneprovsk bridges.

Sad spectacle was revealed to our eyes on this main line. Superstructure of track Germans mangled by "hooks". All larger and medium-sized bridges were exploded. More than 45 percent of points and crossings were rendered unsuitabile. On the Darnitsk junction remained not one intact rail nor structure. Subgrade and embankments to the bridges were cut by trenches, communications trenches, by reinforced-concrete pillboxes, mud huts. On some kilometers of Poltava - Darnitsa main line it was necessary to add 2 thousand cubic meters of the earth. These works took almost 60 percent of time.

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We organized gang work at the wide front and conducted it strictly according to the graph (plan). Simultaneously restored all sectors and drivings, all large structures. Main line from Poltava to the Dnepr coasts was made operational 7 days before the period

established by GKO, instead of 25 days, 18. In each days of brigade they produced 18.7 kilometers of finished track. For that time this was excellent ! It is not difficult to imagine what these seven days meant for the front. In the cruel war, when time was counted in hours and minutes, seven days earlier to begin the ammunition supply of the troops - this was equivalent to the gain of as large battle. Thus was evaluated the labor feat of our railroad workers by the military council of front. The breast of many our soldiers and officers were decorated by orders and medals.

However, what us did allow to complete before the appointed time the restoration of this complicated and labor-consuming trunk line? First of all, the wide front of works along its entire 350- kilometer length. Each brigade, each battalion and detachment of special-formations in advance knew its sector of track and its equipment. This made possible for all subunits to rapidly produce technical reconnaissance of the attached objectives and oin advance to be prepared for their restoration. Usually the return to use of finished sectors was delayed by the large bridge whoich had not been restored. Here there were no such cases. I have described how the bridge battalions sent their groups to the sites in advance, prior to the beginning of the restoration of lines. This measure allowed us to almost simultaneously introduce into operation all sectors of railroad. The basis of the organization of operation was the graph

and rigid monitoring of its execution. Monitoring was done on the spot by officers and engineers of the directorate headed by comrades Dmitriev, Brykin, and Krotenko. Positively had effect on work the experience accumulated by us of the restoration of railroads. Commanders learned to clearly organize works, and soldiers increased their workmanship.

Was high the fighting spirit of our troops. On this the party-political work, well organized in the units, and the wide scope of socialist competition had a most beneficial effect.

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But ahead there lay a no less difficult boundry, which had to be overcome. This boundry was the - Dnepr. A new boundry, new problems. In accordance with them GKO on 20 October, 1943, renamed the Voronezh, Steppe, Southwestern and Southern fronts as the 1st, 2nd, 3rd and the 4th Ukrainian fronts. Our UVVR-3 became part of the structure of the 1st Ukrainian front, General N. F. Vatutin commanded it.

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DNEPROVSK BRIDGES.

Kiev burned. The fire glow colored night sky in the crimson color. From the south the continuous hum of combat came. The troops of the 1st Ukrainian front attacked Hitlerites from the Bukrin bridgehead. Here in the city district enemy solidly held the western bank of Dnepr. River was shot through by dense aimed fire, was illuminated with rockets.

To the scouts of the 19th brigade it was ordered to inspect the Darnitsk bridge destroyed by fascists. Using the dark, now bending down, now crawling, scouts began to advance along the railroad bed to the brushwood of basket willow lining the bank. After moving apart branches, the commander of reconnaisance group Major N. G. Rayevskiy saw the growing dark metallic bulk of bridge. At this time from the dark a resounding youthful voice hailed him:

- Who is in front of us?

Another voice, also same resounding and young, ironically asked:

- Do you fear that they ahead of us will break into Kiev?

Rustling the bushes of osier bed and slapping in the low water, ~~was~~ Rayevskiy was approached by a man in the cape-tent with the submachine gun atilt:

- I with you do not joke, but in earnest I do ask, why you screen the target from us? Are we to fire at your back - is that it?

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After seeing, in the bright phosphoric light of the flared up rocket/missile, the field shoulder boards of Major with the black stripe, submachine gunner introduced himself:

Platoon commander Senior Sergeant Sinitzin. May I ask why you were in front of the infantry?

- special mission.

- It is dangerous here, comrade Major. From that bank the fascists fire mercilessly !

- see, comrade Sinitzin, the destroyed Darnitsk bridge? We should in detail inspect destruction and make a sketch of it.

- The bridge cannot be approached. They are covering it, the reptiles

- Nothing is impossible with us working together.

Sinitzin shrugged his shoulders:¶. Why are you in such a hurry? Kiev will soon be freed - and you can do as you please.

- when you free Kiev, we will have to immediately begin the restoration of bridge. Without the specifications of reconnaissance you can't do anything.

- It is understandable. I desire to you success!

Senior Sergeant took a step into the depth of brushwood and turned to the soldiers invisible in the dark:

- Did you hear? Be alert beyond the bridge. We will cover the

railroad workers in case of something!

Soon the agreed-on place was approached by the group of officers of УВВР-3: L. Ya. Berkovskiy, Yu. V. Galkin, L. I. Brodskiy, A. V. Chernenko. They were sent by me to the aid to Major Rayevskiy. Scouts selected convenient dry place on an elevation along a mound and began to await the morning.

Dawn erased the crimson colors of the burning city from the sky. In milk-white waves swam above the water fog/mist, and railroad workers saw bridge. Its form was terrible. Of 23 supports, survived only six. The span structures, smashed into individual pieces, chaotically projected from the water. Senior Lieutenant Galkin ground from anger his teeth:

- They did that to such a thing of beauty, reptiles !

Berkovskiy pensively said:

- Yes, it is necessary to build new bridge at other place!

They measured by rule of thumb, sketched, photographed ruins. It is now necessary to return to Darnitsa to the headquarters of the 31st restoration battalion of the 19th brigade. Backwards scouts

fought their way under the fire of enemy along the mound now running, now with short rushes, now in a low crawl.

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After several hours I obtained from Darnitsa a radio message with the report about the results of reconnaissance/intelligence. In our practice this was the first use/application of radio.

The information obtained by technical reconnaissance was good only for the specification of the general/common/total restoring diagram of bridge. Already in summer our engineers developed several versions of this diagram. For the calculations of the final technical project data of reconnaissance/intelligence was insufficient. It is necessary to still accurately know the conditions of river in the place of bridge crossings and the size/dimension of its free cross-sectional area. The problem of gathering this information I placed before the commander of the 19th railroad brigade Colonel V. S. Miridonov. He directed to the bridge a second group, which the commander/chief of technical reconnaissance of the staff/headquarters of brigade Major B. P. Vasil'yev headed.

Several times dare-devils went out on a boat in the fiery Dnepr. Concealed by dense morning fogs and by the dark of autumnal nights,

they made the necessary measurements under the nose of the Germans. In one of the nights the engineer of the service of the obstacles of brigade Yu. V. Galkin was wounded by a mine fragment. Boldly and resourcefully performed with reconnaissance/intelligence of bridge Lieutenants G. P. Podlazov and Ye. S. Kozlov, Junior Lieutenant V. M. Galina, sergeants Ye. Veselyy and Ye. Kuznetsov, the soldiers Burakov, Kuznetsov, Veretennikov.

In the zone of attack of the troops/forces of the 1st Ukrainian front were four railroad bridge crossings: two in) Kiev (Darnitsk and Podolsk area, also, one each in Kaneva and Cherkassy. Reconnaissance/intelligence of Kanev and Cherkass bridges was charged to the 7th railroad brigade. The commander/chief of technical reconnaissance of brigade Major A. A. Sagaydak led this operation/process. Directly executed mission in Kaneva the deputy commander/chief of technical reconnaissance of brigade captain A. I. Zykov, in Cherkass - Lieutenant S. K. Yusov. They selected into their groups the most experienced and most daring soldiers. There, as at Kiev bridges, reconnaissance/intelligence was conducted under the fire/light of enemy.

The scouts of Lieutenant Yusov detected that the surviving constructions/designs of Cherkass bridge were prepared for explosion. They decided to prevent Hitlerites from completing what they had

planned.

The night of 21 October was dark, rainy. Enemy continuously illuminated river and conducted agitated fire along our bank. It first abated, then it flashed up with new force.

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After leaving their detachment on the shore for the cover, Lieutenant Yusov and Chief Petty Officer Shmatko went down to the river. They entered into the black cold water. Quietly they floated along the supports. When the third support behind remained, Shmatko began to lag - he wore himself out. Lieutenant ordered turning back to him. Now Yusov swam alone. Water burned with cold, compressed breast. "If only I don't get a cramp", thought Lieutenant. Finally legs touched silt. He arose, deeply sighed and began carefully to clamber up on the support to the metallic farm/truss. He grasped fire cable. He removed/took from the belt cutting pliers and cut off several meters of wire/cable. With his teeth chattering from the cold, he went down on the support into the water. The shaking, tormented Yusov was caught by the scouts by the hands, dried off, and given dry clothing.

The courageous scouts of the Dneprovsk bridges L. Ya. Berkovskiy

and S. K. Yusov front commander General N. F. Vatutin were awarded the order of the Red Star by General N.F. Vatutin who commanded the front.

We always believed that soon again we would return to Dnepr, knew that the Hitlerites would not leave to us whole not one single bridge on the great river. But the bridges in Dnepr are large, are nonstandard, complicated. Taking into account all this, preparation for their restoration was began already during July - August by the group of design and planning engineers УВВР-3 Voyentransproyekt [military transport plan], headed by A. G. Ogoyev. In this group were included important bridge builder-designers N. F. Rudnev and G. F. Ivolgin. Managing the Voyentransproyekt was the chief engineer of our directorate G. I. Zingorenko. He knew well Kiev bridges. Even before the war led the construction of Podolsk railroad bridge and the Navodnitskiy highway. Before the war on the construction of all these structures worked I. Yu. Barenboym and also almost entire personnel of his detachment.

This group of specialists still in summer examined the design documentation of all Kiev bridge crossings (Darnitsk and Podolsk - railroad, chain-link, Navodnitskiy and others - highway) and developed three versions of the restoration of Podolsk, five - Darnitsk and one - motor-and-animal bridges. Additionally (in the

case of delay with the restoration/reduction of primary bridge) the spare projects of ferry railroad crossing formulated.

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At the same time in the area of the Khrenovaya and Bohr stations of the southeastern railroad we developed the procurement of lumber. This had an advantage, in the case if near Kiev there does not prove to be lumber suitable for the bridges. After the rout of Germans on the Kursk salient, simultaneously with the large restoration works we brought into the combat condition all our mechanisms, tools, in the mobile workshops forgings were made for reserve. During September front commander called me, G. I. Zingorenko and G. F. Ivolgina with a report. To the conference of military council we arrived with the voluminous bundles of diagrams/drawings, and, when we began to hang them up on the walls of office, N. F. Vatutin was astonished:

You put in quite an effort!

L. R. Korniyets joked:

You came well prepared!

It must be said that already long before this conference between

the specialists for the NKPS and our directorate did arise disagreements regarding what bridge to build first of all: high-water or low-water? The NKPS insisted on the construction of high-level bridge. In the future to exploit road would be the work for comrades from the NKPS, and it goes without saying they wanted to have a reliable structure/installation across Dnepr. Low-level bridge will be swept away by spring seasonal flood, and road there will be cutoff. Trying to get a decision to build low-level bridge, we advanced our reasons. From UVVR-3 the front must urgently give bridge crossing. According to our calculations, for the restoration of high-water passage it is necessary to expend 40 days, and low-water - 20-25. This almost is two times less. This dispute had to solve the military council of front. After reporting our considerations, I in conclusion said that we are prepared for the erection of two bridges: low-water and high-water Darnitsk. When I finished report, N. F. Vatutin asked:

- With what forces do you are intend to carry out the construction of low-level bridge?

I reported that toward the end of September and at the beginning of October in Darnitsa area we will concentrate two battalions and bridge restoring detachments of Barenboym.

Commander summed up the conversations:

- if we free Kiev in autumn, we will build low-level bridge. It will stand until the spring. We will in winter construct high-water. If Kiev is freed in winter, then immediately let us begin the erection of high-water. Under the floating of ice to build low-water bridge there has no meaning.

All members of military council agreed with this. Before the closing of conference lieutenant general L. R. Korniyets with surprise asked:

- You request from us no aid. You can actually manage alone, with your forces?

We already knew that L. R. Korniyets after the liberation of the capital of the Ukraine will fulfill his previous post of the chairman of the Council of Ministers of Ukrainian republic. He transferred affairs for the military council of front to Major General N. T. Kal'chenko. Turning to Leonid Romanovich, I said:

- Without the aid of the local population we will not manage. We

will request in this your assistance.

- You can rely on the aid of our people !

Military council accepted our version of the construction of low-level bridge. Its length was 1059.5 m and the height/altitude of 5.5 m. We planned to construct bridge 80 m lower than Darnitsk. We decided to span navigable river bed on the left shore with twelve span structures (length of 23 m each). In the middle of the river, where the depth did not exceed 1 m, we decided to place wooden pier, to span it with H-beams 5 m. in length. The right channel, where the depth achieved 5-7 m, we designed to span with six span structures with the length of 23 m.

When technical reconnaissance presented more precise data to us, it was necessary to radically rework this diagram. But about this I will describe below.

As the construction commander of Darnitsk low-level bridge the NKPS assigned me, and as chief engineer G. I. Zingorenko. For the monitoring/checking of the process of works we created special dispatcher apparatus, after manning it with specialists experienced, knowing their affair.

We divided the entire Front of the construction of bridge into four sectors. The first sector encompassed the left-bank deep-water unit of the river bed. The construction of this most difficult and complicated sector was affigned to the bridge-restoring detachment No. 2 of I. Yu. Barenboym.

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To help him was brought the bridge train No. 434, which specialist-bridge builder N. I. Polyakov commanded. Behind the collective of this train there was the work on the restoration of the bridges across Borksla and Sula. Personnel of train thus far successfully managed the repair of beams for the Dneprovsk bridges. These beams were taken by troops/forces of our front from Germans at the Grebenka station.

Raising the second sector - gantry - was assigned to the 33rd bridge battalion of the 7th brigade. Major A. Ya. Dain commanded battalion. The third sector - right-bank, to the pier - was, to be built by the 14th bridge battalion of the 19th brigade. Commander - Lieutenant Colonel V. S. Vikhorev. They gave the fourth sector to the 44th restoring battalion of Major K. A. Stepanov. Battalion had to measure off from both sides of bridge approaches and lay on it route/path. The protection of construction, delivery to the

construction site of materials and constructions/designs we assigned to the 33rd restoring battalion of Lieutenant Colonel V. G. Belyavskiy.

At the end of October I gathered commanders and commanders/chiefs of future construction. Conference took place in quarters/premises of the field staff/headquarters of the directorate near Darnitsa. I described to participants at the conference our combat missions, introduced them to the design of bridge, the plan of its construction and the deployment of forces. Then the calendar operating schedule, designed for 20 days, was entrusted to each commander/chief of sector. This period was established for us by the NKPS. In order to keep within this time, we had to, at the moment of liberation of Kiev, prepare everything necessary for restoring the bridge. Lumber alone (piles, circular timber, beams, and boards) for the project was required about 5000 cubic meters. Some piles it was necessary to hew into shape more than 1000 pieces. Furthermore, we had to prepare more than 50 tons of forgings.

The constructions/designs of future bridge in the forest reserrve tract not far from Darnitsa, 20-25 kilometers from the river. With pain we looked, as the 100 year old pine trees cut off at the roots were brought down, we felt sorry for every one. But war is merciless ....

During those October days the preserve appeared as enormous construction site. Under the crowns of pine trees the soldiers bound frames, were prepared piles and bridge beams.

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Diesel hammers knocked. Pile driver groups mastered the high-speed tamping of piles.

In the center of forest the Bortnicha station was located. To it a siding track was laid from the cutting area. At this time the brigades completed the restoration of main line from Poltava to Darnitsa.

On the cutting area the messenger from the staff/headquarters of the control found me and entrusted to me telephone message from Lieutenant General L. R. Korniyets. The member of military council proposed to me together with G. I. Zingorenko to report about the condition of works on main line and about preparation/training for the construction of low-level bridge. We left for the staff/headquarters of front. The nearer to Dnepr, the more audible the increasing hum of combat. Battle for Kiev had begun. Leonid

Romanovich, as always, met us benevolently. I reported the necessary information to him. Korniyets attentively listened us and said:

- position/situation with the crossing means is heavy. There are not even ordinary wooden pontoons. It is necessary for you, comrade Kabanov, to aid in assault crossing of Dnepr. Take up immediately the development of the design of crossing for the attacking troops/forces. Use empty barrels, logs, anything. That will ensure the passage across the river.

- On our shoulder is low-level bridge, comrade General ! We will manage it in time.

- Personally you will be occupied this bridge, and Zingorenko will ensure crossing. Grigoriy Isaakovich will find the method to construct it. Bridge builder is experienced. We know each other from Kiev and Moscow.

- I obey !

On this the conversation ended. To our happiness, in several days it was reported to me from the staff/headquarters of front that the mission is abolished. Engineers obtained wooden pontoons.

In order not to commit errors in work, we again conducted the most careful recomputation of drawing. In the process of this it became clear that there is the possibility to construct bridge 6-8 days more rapid than the period indicated. But for this it was necessary to increase the pool of pile drivers to 17 units. We had only 12 pile drivers and furthermore not very reliable ones. To obtain the assignment of supplementary pile drivers as yet did not succeed.

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In the morning on 3 November the troops/forces of the 1st Ukrainian front began attack on Kiev from the Lyutezh bridgehead which is north of city. The roar of guns abated not for a minute. Above Kiev an enormous glow of fires stood. The decisive hour had come. And preparation/training for the construction of low-level bridge achieved culmination point. Soldiers and officers did not depart from to scaffolding/forest. And I and Zingorenko the whole time were in the subunits. Late in the evening on 5 November we arrived at the staff/headquarters of the bridge-restoring detachment No. 2. Staff/headquarters in the village of Aleksandrovka was located. This detachment was formed in Kiev from the builders of railroad tunnel. Many of them had in the burning city relatives, friends and acquaintances. Zingorenko, and Barenboym and his deputy

Saprykin also had friends and acquaintances who remained there. We for long did not lie down to sleep, we recalled prewar Kiev, we were disturbed for the fate of close ones.

They called me to the telephone. S. V. Brykin rang from Grebenka, from the staff/headquarters of the directorate.

- We conducted a solemn meeting in the honor of twenty sixth anniversary of October. General Belyayev delivered Red Challenge Banner to us!

Red Challenge Banner of GKO and VTsSPc [ВЦСПС - All-Union Central Trade-Union Council] was awarded to the railroad troops/forces and to the special-formations of our front for superiority in the socialist competition. General S. N. Belyayev, deputy commander/chief of the railroad troops/forces on the political unit, specially arrived in Grenbenka for presenting to us this banner. Skipping ahead, I want to say that 18 times in a row GKO and VTsSPS awarded us the Red Challenge Banner.

I spent the remainder of alarming night in drowsiness. Hum of the aircraft merged with the roar of guns. But the morning on 6 November was still more alarming, still more joyous. It began from the fact that the officer from the logistical headquarters of front

arrived and entrusted official letter to me. I opened the letter, read it and could not believe my eyes. By edict of the Presidium of the Supreme Soviet of the USSR to me is awarded the rank of Hero of Socialist Labor with the presentation of the Order of Lenin and Zolotoy medal "sickle and hammer". I scarcely had time to read it, when officer joyfully blurted out:

- Kiev is liberated !

All jumped up from their places, began to congratulate each other with the victory, to embrace each other.

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Officer reported to me that I immediately must ring in Moscow the Peoples Commissar of lines of communication. Peoples Commissar congratulated me with the high rank, he wished me new great successes and reported that the rank of Hero of Socialist Labor is awarded to 127 railroad workers, including 39 to military railroad workers and to the workers of special-formations. Among them Colonel P. I. Bakarev, Lieutenant Colonel P. I. Korshunov, I. Yu. Barenboym.

Together with Zingorenko and Barenboym, I immediately left for the Darnitsk bridge. We reached the Dnepr. Near the bridge the

commanders Dain and Vikhorev met us.

Motor boat was already let down on the water, we sat down in it and we began the last reconnaissance of the axis of future bridge. Following the motor boat the geodesists and designers, who made the necessary measurements of river, sailed on the boats.

Soon geodesists reported, that all their measurements accurately coincided with the data of scouts. Children did not screw up, although they worked under the fire of enemy!

We returned to the left bank. Here work was in full swing, they prepared for the release on the water the boats, the rafts, the motor boats. Captain A. V. Borzov's company unloaded from the motor vehicles the piles and captured barrels. We gathered more than three thousand of them on the roads of war. True, fascists the majority of barrels pierced with automatic bursts. But the soldiers of the company of captain A. A. Oslikovskiy welded holes, sealed them up with wooden plugs and then connected the barrels together in pairs. Pairs were fastened to the ferry-boat frames. Soldiers laughed:

- The ferries will be good for our pile drivers.

- Real pontoons!

To the construction site kept going motor vehicles, tractors, and carts loaded with lumber. But now from the direction of Darnitsa appeared also the smoke of steam locomotive. It was bringing the first train with lumber.

On the ruins of Darnitsk bridge and on the approaches to it the miners worked. They inspected/checked each plot of the ground. In the searches/scannings for mines the dogs helped them. I with interest observed, how, holding on a lead a four-footed assistant, a miner carefully advanced along the mound. Dog, after sniffing part of mound, took up pointing stance and began to bark. A soldier kneeled and began to carefully dig out the ground in this place, he cut the filaments of wire, took out fuse and raised wooden box - antipersonnel mine.

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It is necessary to say that the dogs helped miners to render harmless thousands of mines, they saved life of many soldiers and officers.

The pile drivers of the 33rd bridge battalion placed their

diesel vehicles on the home-made ferries. The installation was directed by assistant to commander on technical section the young, lively engineer A. E. Desov (now Honored Scientists and Technologist of the RSFSR, the laureate of state prize, the doctor of technical sciences, professor of one of the Moscow institutes). I asked Arseni Yefremovich when pile drivers are ready for going on to water.

- The first are being brought to their sector tomorrow in the morning! - He answered.

Toward evening the weather unexpectedly sharply changed. Cold northern wind blew. Snow with rain fell. It dazzled eyes, hampered movements. Soon overcoats became wet, and became hard. Ice streams penetrated under the service shirt, cold pierced body. But work ceased not for the minute. When it was completely dark, bank was illuminated by searchlights. Our movable electrical station gave current. Captain Borzov's company was the first on the shore of river to erect its six pile drivers. Soldiers placed on the pontoons tools, attachments, rolled barrels with the fuel. By dawn everything was prepared. Tens of hands pushed ferry from the shore. Wind struck the ram guide of pile driver as a sail, and it carried it downstream. Soldiers with the aid of oars and the boat hooks started to guide ferry to the necessary direction. But the force of element proved to be greater than human. Only about 10 kilometers from the bridge it

was possible to moor the persecuted by wind ferry to the right bank. Backwards soldiers drew it like barge haulers, on themselves. Meter after meter, up to the waist in the ice water they persistently moved to the construction sector.

Toward evening of 7th November all preparatory works were completed and the general assault of Dnepr was begun. The knock of axes was heard intermittently with stacatto beat of diesel-hammers and crack of winches. The first piles driven on the abutments appeared. Electricians placed searchlights on them. Divers inspected the bottom of river, cleaned places of scrap metal for the tamping of piles. I watched the work of divers in the 3rd sector of Lieutenant Colonel V. S. Vikhorev.

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Private first class Nikolai Savushkin was prepared for the next descent/release under the water. Comrades helped him to put on pressurized suit, screwed up helmet, and diver left to the bottom of river. We await. Regularly thumps the compressor, which feeds to diver fresh air. Above the water bubbles string together in a chain. By them from the ferry they follow the movements of diver. I withdrew with commander Vikhorev to the pile drivers. And when in the hour I returned, Savushkin above the surface of river still did not show.

Commander ordered to raise diver.

- I'm giving command to raise you! Cease work! - With alarm in his voice shouts into hand receiver platoon commander.

- wait another five minutes, I will retract scrap metal, it will interfere to drive in piles, requests Savushkin.

Vikhorev oscillates and looks at his watch. From the moment of submerging of Savushkin an hour and twenty minutes has passed. Longer for diver to be located under water is dangerous. Commander orders to platoon commander:

- Raise!

Winch began to crack. From the water spherical steel helmet emerged. Comrades caught the diver, placed him on the unsteady scaffolding of ferry, removed his helmet. Savushkin, after making several deep inhalations, reported to us:

I've cleared place for five piles. It is possible to drive them in.

All soldier-railroad workers so heroically worked. Day and night

they worked. By the third day Dnepr was completely girded by lumber scaffolding, ferries, numbers of the driven in piles. Pile drivers resembled the barrels of the anti-aircraft guns. However, their friendly knock not for long gladdened my heart. Of the 17 installations, 5 malfunctioned. The driving in of piles began to lag behind the graph/curve. We took all measures in order to repair machines, but affair went badly. But without the piles there will not be a bridge. The groups of pile drivers, which began competition for the overfulfillment of the norms of consumption/production/generation, rescued. Lieutenant Ye. P. Kabotin's platoon was the initiator of competition from the bridge detachment of Barenboym. Personnel of platoon took upon itself the obligation in a shift to drive in 14-16 piles with norm 8-10. Political workers supported remarkable initiative. At visible places appeared the combat leaflets, which tell about the initiative of the platoon of Kabotin, and slogans, which call for completion of task ahead of time.

Page 224a.



N. I. Krasnobayev.



S. V. Brykin.



M. B. Yakhnovich.



G. I. Zingorenko.

Page 224b.



Station tracks left by the retreating enemy.



Restoration of Kharkov railroad junction.

Page 224c.



P. A. Frolov.



P. I. Bakarev.



M. S. Pogorzhel'skiy, L. Ya. Berkovskiy.

Page 224d.



P. I. Korshunov.



V. S. Petrov.



Personnel of staff/headquarters UVVR-3.

Page 224e.



A. A. Galafeyev.



A. D. Sushko.



A. N. Tkachev.



V. V. Polotev.

Page 224f.



P. K. Kulishev.



V. S. Miridonov.



I. V. Sytnik.



A. A. Tavluy.

Page 224g.



K. A. Stepanov.

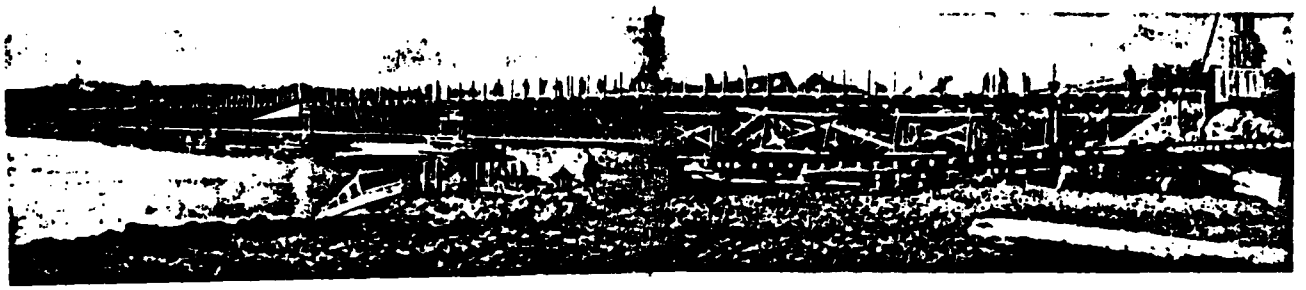


M. K. Kletkin.

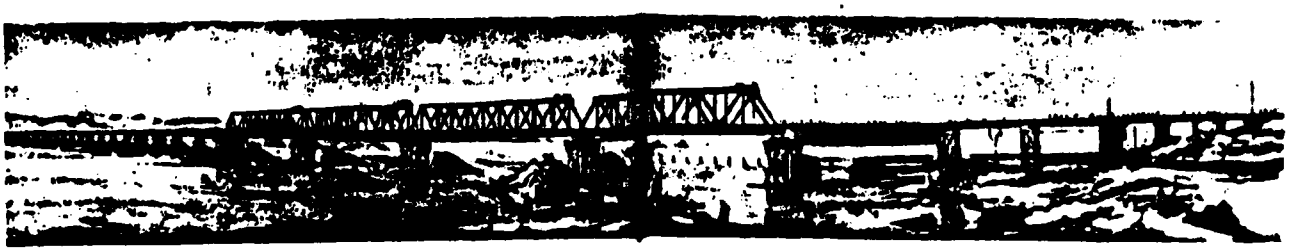


N. S. Vikhorev, M. P. Korneyev.

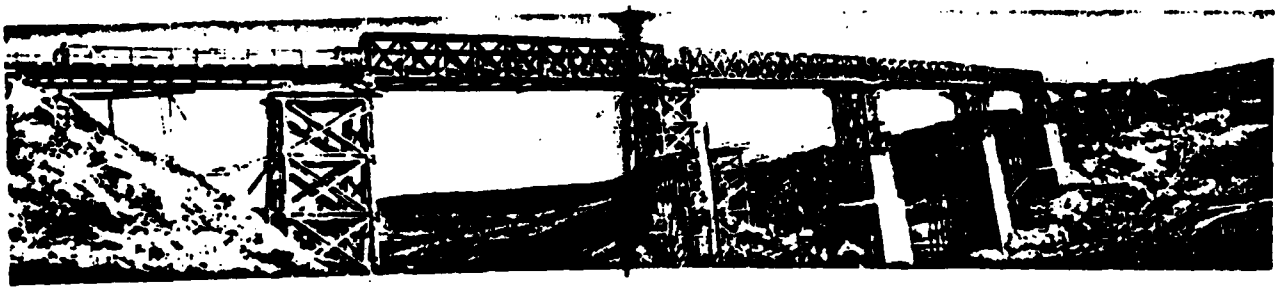
Pages 224h and 224i.



Construction of the low-level bridge across the Dnepr in Kiev.



Restored high-level bridge across Dnepr in Kiev.



Is restored viaduct at Potutory station.

Page 224j.



A. Ya. Dain.



A. E. Desov.



Poet Joseph Utkin among officer-railroad workers.

Page 224k.



V. S. Kardash.



I. M. Shapovalov.



N. I. Novosel'skiy, D. M. Ershov.

Page 2241.



A. I. Sokolov.



B. V. Bobrikov.



V. S. Gavrilov.



I. Yu. Barenboym.

Page 224m.



L. D. Saprykin.



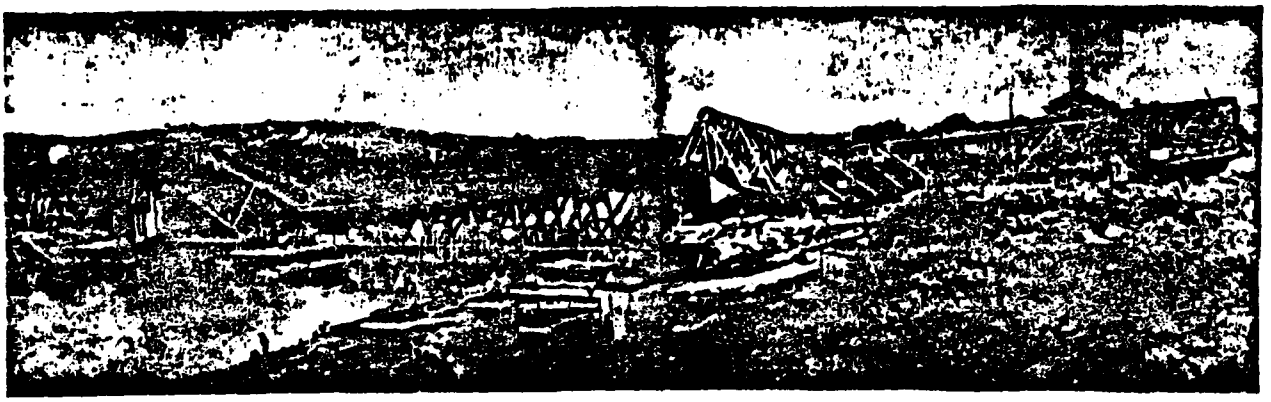
P. F. Krivonos.



I. V. Timofeyev.



V. I. Ogarkov.



Thus appeared the bridge across the San river that was destroyed by the Fascists.

Pages 224n and 224o.



F. N. Tarasov.



V. A. Chigarkov.



M. F. Bondaryev.



S. A. Tarasyuk.

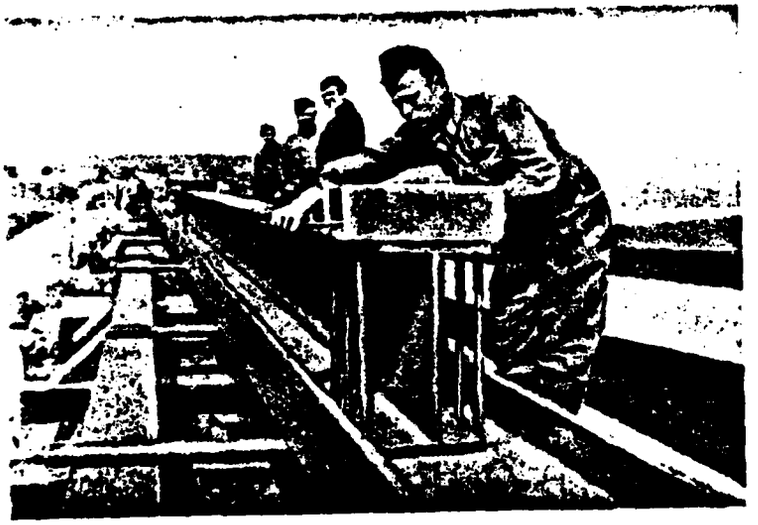
Page 224p.



B. M. Vasil'yev.



P. F. Belorukov.



Senior Sergeant Dumich, who was outstanding during the restoration of many bridges.

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In the sector of the 33rd bridge battalion of A. Ya. Dain enormous letters from the railroad announced: "To the heroes of Dnepr, who lead successful combat on the right bank, let us give them before the appointed time railroad bridge"!

All pile drivers, groups of carpenters, metal workers, headed by Lieutenants Ye. M. Sedykh, V. M. Guzhayev, A. I. Gvozdarev, followed the example of communist Kabotin's platoon. Communists - carpenters A. N. Nikitin, M. P. Klimov, S. D. Tugay, K. P. Chernenko - three times exceeded norms on the assembly of frames for the span structures.

On with one of the pile drivers of the bridge detachment No 2 on a large plywood shield I read such verses of appeal: "work harder at pile driver and think about one thing that both Dnepr banks be connected by bridge"! Verses to me liked themselves. He who wrote them proves to be the party organizer of detachment V. G. Uglitskiy. I inquired about the organization of mass-political work in the detachment, about the mood of people. Uglitskiy reported:

- With the work progressing on the Dnepr has increased the inflow of statements to the party. Just today expressed the wish to

enter as candidates for membership in the party seven people. They say, we want as communists to storm the lair of Fascist beast - Berlin !

Vasiliy Grigor'yevich described that I. Yu. Barenboym renders active aid to the political workers of detachment. He frequently appears in the companies with the reports and the conversations. Recently were conducted conversations on the theme the "value of Dneprovsk bridge for the troops/forces, which are liberating right bank of the Ukraine". At the party meeting taking place last night he gave a report "on the problems of communists in strengthening of discipline". Uglitskiy showed me the copy of the text of conversation printed on the typewriter "road to the West lies across the Dnepr". This text was distributed to agitators.

During our conversation the boat from the right shore approached the mooring. From the boat Vladimir Vladimirovich Polotev, who returned from technical reconnaissance of Kiev railroad junction, jumped out. With pain in his voice said Vladimir Vladimirovich:

- I looked at my native Kiev, and in my eyes it became dark. Kreshchatik is a mountain of ruins. Few inhabitants remained. Thousand are shot, reptiles. In the blood they drowned city !

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Polotev again glanced across the river at the gold-plated cupolas of the Kiev-Pechersk monastery and began to report about the results of reconnaissance/intelligence. With this unit Polotev spent the best years of his life. Here in the workshops of the division of rails his working career was begun. He worked as hammerer. Here he entered the party, many years he was the leader of the communists of division. Each corner of unit, each barracks - are filled with recollections.

- the wonderful building of passenger station, reported to me Vladimir Vladimirovich, has blown up. Car-repair plant is in ruins. Twenty four small bridges and viaducts are destroyed. We calculated: are disabled forty two percent of station rails, about seventy percent of points and crossings, are wholly annihilated all couplers and signalling, water supply, outfitting of steam locomotives .... - After sighing heavily, Polotev continued: - on the way to Volynskiy post they went in houses and barracks of workers. They conversed, they drafted people immediately to begin to restore that which was destroyed by enemy. Railroad workers with the gladness undertook affair. At workshops arrived about 180 people, in essence elderly people. Engineer Smagin who worked in the urban underground undertook to restore water supply. With my agreement he formed brigade from the

best metal workers. Road foreman Tsarenko headed the column of civil engineers. Directly with me he dug up the new points and crossings, which he hid as early as 1941 during combat for Kiev. We organized other brigades. Foremen were assigned: the blacksmiths Korzhenevskiy, Kuzin and Malishevskiy, carpenter Tsukanova, office workers Avramenko and Niznika. All brigades already work, and to help them newer and newer people continously arrive.

I thanked Vladimir Vladimirovich for the valuable initiative. Soon to the aid to Kiev railroad workers arrived the battalions of 19th and 14th brigade of Colonels V. S. Miridanov and S. I. Ivanov. They were assigned the restoration of Kiev junction and liberated sectors of road from Kiev to Korosten' and to Fasts.

In the days of the construction of low-level bridge I lived in the mud hut of signalmen on the bank of Dnepr. There was here my working "office". After having a talk with Polotev, I entered the mud hut and began to examine/scan papers. From this task I was distracted by Lieutenant Colonel Vikhorev's voice:

- comrade General, can I come in?

Commander arrived with his deputy for technical section, captain M. P. Korneyev. He was one of the most experienced bridge builders. To the opinion of Konreyev always listened even such a "die-hard" as Zingorenko. We frequently assigned Mikhail Porfirshchevich to the development of the designs of large bridges. After entering into the mud hut, Vikhorev and Korneyev kept silent, they did not decide to begin conversation. Then I asked them:

- Well, what can I do for you?

- you will permit us, comrade General, to introduce changes in the design of the construction of bridge in our sector!

- Why?

- We found twelve captured Peine beams. Length of each was twenty seven meters. Let us cut beams in half.

However, - how will it then turn out?

Vikhorev explained that the spans, instead of the designed length of 23 linear meters, will become - 13.5 meters each. From the cut beams it is possible to assemble relatively light packets and to place them on the supports. A number of supports will increase almost

doubly. But battalion will manage without the aid of a single UVVR-3 pylon crane. We had moreover, this crane is loaded with work in the Barenboym sector.

- How do you intended to roll your packets?

My question Korneyev answered. It was felt that this was his idea.

- We found on the shore flat-bottomed boats. With their aid we will roll packets.

- Did you think over everything accurately, make calculations, there won't be any errors?

- We are certain - it will work without error !

Proposition is tempting, reasons reasonable. If so, then the construction of right-bank sector will become independent, not dependent on other sectors. I rapidly weighed everything "for" and "against", gave my agreement to change in the project.

Next day in the morning I went to the pile drivers. The day before we obtained additionally six new diesel-hammers and the night

was spent on their installation and adjustment. The affairs of the pile drivers concerned entire construction. Indeed the tamping of piles continued to lag behind the graph/curve, and this imperiled the period of readiness of bridge, which was inadmissible.

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Bridge crossing was necessary for the fighting armies like air. On 13 November enemy passed into the counteroffensive against the troops/forces of center and left wing of our front with forces of eight tank and motorized and seven infantry divisions. Heavy defensive actions were begun. About the developing situation at the front the commander/chief of the rear of front General V. N. Vlasov informed me. He demanded speeding up the construction of bridge.

In spite of the early morning, G. I. Zingorenko was already up. I met him in commander Dain's sector. Grigoriy Isaakovich reported:

- Only twelve pile drivers worked. We are trying to get five more going, but it is thus far unsuccessful.

They soon called me to the telephone. Brigade commander 14 Colonel Ivanov rang. He reported that in Fastov there are seized 3 hot steam locomotives and 40 cars of West European track. I ordered

to form three shuttles from the captured rolling stock and to organize on them the delivery/procurement of the necessary cargoes from the Kiev junction to the front line. In several hours Ivanov reported about the execution of order. Cargoes to the Kiev junction were transported across Dnepr by motor vehicles and cartage on the pontoon bridge, constructed by engineers. By the way, not far from the construction of our bridge auto-road builders raised their bridge crossing. Work was directed by my colleague in the Far East General Z. I. Kondratyev - commander/chief of the highway troops/forces of the Red Army.

Let us return to the events of that memorable November day. From the second sector I went to the destroyed Darnitsk bridge. Across its surviving elements we put up pedestrian navigation bridges. On them Kievians, who helped us, brought different materials. Then soldiers loaded these materials on the boats and transported them to the bridge being built. Heavy, bulky constructions/designs were delivered from the bank to the sectors by barges, by pontoons, by boats.

The inhabitants of Kiev exerted enormous aid to us. On the construction more than 900 Kievians worked. The majority of them we assigned to raise embankments on the approaches.

As before not for the minute did the pile drivers give me rest.

All new installations I ordered to be transferred to the first sector of I. Yu. Barenboym, where the tamping of piles most of all lagged behind the schedule.

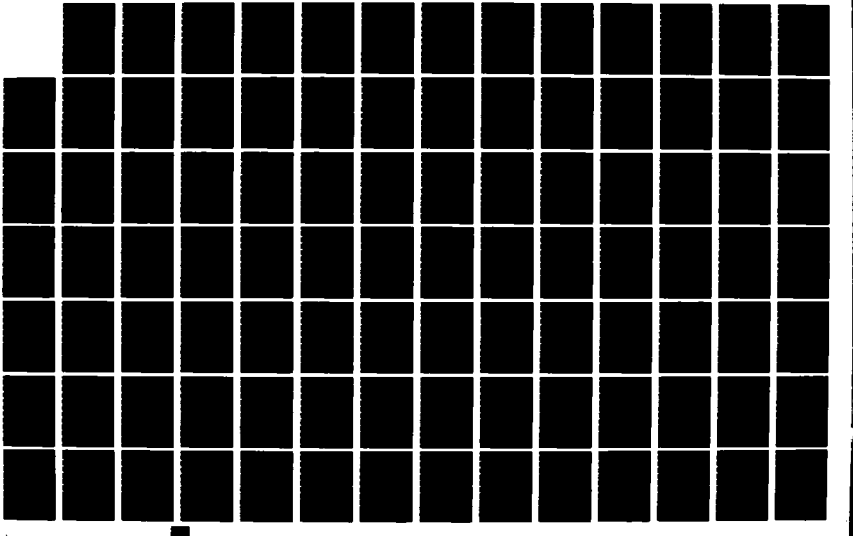
Page 229.

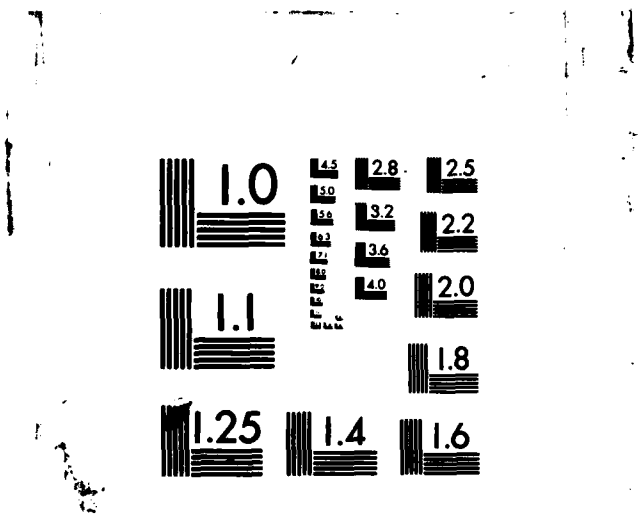
Here was the deepest place. The bottom of river is so cluttered by stone, scrap metal, wood, that the divers do not manage to clear it. It did not help to solve this problem the transferred to sector new diesel-hammers. The plants of our central board prepared these machines, although they still had design faults. New diesel-hammers frequently malfunctioned, required adjustments.

As a result of all these complications in the first sector this position/situation was formed. According to technology the supports must go into service consecutively from the left bank to the middle of river. In the same sequence is conducted also the organization by a tap-pylon of span structures. This process was destroyed. The supports, located nearest to the middle of the river first proved to be ready. How to get out of the created situation? I decided to confer with specialists. Were gathered in my mud hut Zingorenko, Barenboym, Ivolgin, and other engineers for our directorate. After long discussions and disputes we arrived at a unified opinion: works can be conducted in parallel. For this it is necessary to arrange

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

pile drivers not in the sectors, but to place them so as not to disrupt the general/common/total technological process of construction. Then it will be possible to drive in piles consecutively/serially, and as the supports are ready, to lay span structures.

Not long before this conference the Chief of Engineers of front assigned 4 SP-19 pontoons at my disposal. We decided to make 2 ferries of them, with the aid of which to produce the laying of span structures. We developed a number of measures, which made it possible to conduct construction on a wide front and to combine a whole series of labor-consuming operations. Particular attention I paid to the need of reinforcing the political work in the units, the special-formations, and among the local population. Zingorenko and Ivolgin were charged, on the basis of the propositions introduced at the conference, to develop a new refined operating schedule.

I examined the new schedule and affirmed it. Political workers began to actively explain to builders the value of ahead-of-schedule. Our railroad front newspaper "for the rout of enemy" devoted to construction whole issues. On its pages the portraits of front-rank workers and article about them appeared. The methods of highly productive labor widely spread. Communists headed competition. Engineers changed technological process.

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In the construction it was as if someone breathed in new life. In a new way, more distinctly, its pulse beat in each sector, at each work site. There was no brigade which did not exceed its daily tasks.

The period of the laying of span structures arrived. This operation is complicated, is labor-consuming. With the previous schedule it was proposed to install consecutively the trusses with the aid of the only pylon crane in the construction. This occupied much time. First, as I already said, M.P. Korneyev began to be released from the services of crane. On his order the soldiers of the 14th battalion constructed piers, they equipped with the necessary devices (frames) the flat-bottomed barges. To the piers were delivered the finished, shortened to 13.5 meters packets of H-beams. Now they must be loaded on the barges, brought to the supports and placed on them. But barges with their design do not match in overall size, the piers (they are higher than them, since they are designed for the settling under the cargo). In order to lay packets, boats must be loaded at a definite/determined depth. Usually as ballast water is used. But in the battalion there were no pumps for its evacuation. Such ballast, as stone or metal, is time-consuming for

loading and unloading. But here every minute counts. Commander Vikhorev as ballast decided to enlist builders.

In order to achieve the necessary level of the draft of barges, were required 100 people with a weight each of 100 kilograms. But what is to be done with the people of smaller weight? They gave to them to hold in their hands a piece of metal. On command the people entered the barge, laid to the bottom their cargoes. The deposited boats brought under the piers, were losded on them the packets. But the "passengers", after picking up their pieces of metal, left the barges. Operation/process passed rapidly and simply. In this way was produced the laying of packets to the supports. In all here we installed 12 span structures.

Each construction sector experienced its difficulties, it searched for the most effective engineering decision/solution of complicated labor-consuming operations/processes. Thus, for instance, for the 33rd battalion in the middle sector metal beams were not sufficient. Where to get them? Commander A. Ya. Dain ordered to cut out beams from the trusses of the Darnitsk bridge destroyed by Germans. The length of each cut out beam was 5 linear meters. Soldiers laid them on the supports by hand on an inclined plane.

end section.

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On the first, deep-water section of I. Yu. Barenboym's span structures had a length of 23 meters. Here for their laying on the supports we used the self-propelled pontoons SP-19. Just as in Lieutenant Colonel Vikhorev's sector, were constructed piers. For the draft of pontoons and their lifting with the burden as ballast water was used. We pumped it in and pumped it out with pumps. To the spans under the supports the pontoons approached by their course. Each operation as a whole occupied not more than 3-4 hours. Were installed 6 span structures thus. The weight of each of them composed 25 tons. Remaining span structures were placed with the aid of pylon crane.

With each day the tempos of construction ever increased. Soldiers, officers and Kievians worked without tiredness. Many for three days running did not close their eyes, they did not depart to rest. It was difficult then to isolate the best ones. Each of 2500 soldiers and 1800 townspeople was worthy of highest praise. And nevertheless more rapid and better than others worked the soldiers of the 33rd battalion of Major A Ya. Dain. His sector solidly held Red Challenge Banner. They set the tone for the entire construction of the squad of pile driver operators, which Senior Sergeants Gurin and Krivushin commanded. Welders P. I. Shestakov and N. D. Tereckov

worked continuously for 36 hours straight.

No one during the construction could be reproached for negligence or laziness. Each builder understood the very important value of bridge for our troops/forces. All heard the distant terrible hum of gun cannonade, they knew that there, in the depth of right-bank Ukrainian steppes, our soldiers repel the furious counteroffensives of the enemy, who again making a break for Kiev. About this spoke agtitators, the political workers, commanders.

We also knew that Hitler ordered his pilots to bomb our bridge at any time of day, in any weather and under any circumstances. To smash the construction of bridge - indicated for the enemy to win battle. Therefore we declared our construction leading front line, we gave word to come out this battle as victors.

On the tenth day the air alert signal was given. In the sky German aircraft appeared. People became agitated, some in a panic broke into a run to the shelters. But at this time above the construction Red Flag was raised.

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Raising it high above his head, the deputy commander-33 for political

unit S. V. Leonov carried it. And people stopped, again undertook work. They heard the voice of their combat deputy commander for political affairs [zampolit].

- Will have stand to our death, as they stood in the environs of Stalingrad, on the Don and Liski!

The approached hostile aircraft was met with powerful fire from the anti-aircraft guns of the front batteries, which protected construction. Fascist enemy aircraft began to release bombs at random. Dnepr boiled from the explosions/bursts, the black plumes of earth rose on the bank. But not one of the builders left his working place. The pile drivers continued to drive in the piles, to place the girders reliably on the prepared supports. The first massed attack of the enemy did not disrupt carrying out the daily schedule on a single sector.

During these days the enemy attempted to reduce bridgehead of the 1st Ukrainian front on right Dnepr bank and to again master Kiev. Soviet command element foresaw this course of events and in proper time gave order to the troops/forces, which performed on the bridgehead/beachhead, to pass to the defense. In Kiev area the concentration of large/coarse reserves was begun. In this situation the value of our low-level bridge even more increased. Across it had

to march into battle the tank formations standing on the left bank.

Telephone message in the evening came from the staff/headquarters of the front: commander N. F. Vatutin called me. Nikolai Fedorovich accepted me immediately, as soon as adjutant reported to him. After greeting me, he led me to the opened map hung on the wall of office. After taking in his hands pointer, the commander said:

- see, what difficult situation has developed at our front? Hitler threw eight tank and motorized and seven infantry divisions in Kiev. Reserves are necessary, are necessary the fresh tank troops/forces. They stand beyond Dnepr. Your bridge for us is necessary as air. Is it not possible to accelerate its construction at least by one-two days? !

I spread out our new calendar schedule on the table. About its existence Nikolai Fedorovich did not know. He excellently remembered that the military council of the front and NKPS to us established the period of construction - 20 days. And when I did report, that we do consider it possible to hand over bridge 6-7 days earlier than the period, Nikolai Fedorovich emotionally did ask again:

- Seven days earlier than the period? ! You are not mistaken?

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- On the Twentieth of November on the bridge will pass the first trains!

And I in detail reported about the rearrangement of operational procedure, the combination of basic operations, about their execution on the wide front.

I described, how in the third sector we replaced span structure with the length of 23 meters by short captured beams, which were found in Kiev. Specifically, they made it possible to manage without pylon crane. These beams from the barges were laid in place. The third sector ceased to depend on others, it sharply increased the tempos of work. When in the first sector began to lag the driving of piles, which did not make it possible to deploy work along entire front, we decided to combine operation/process. The laying of span structures to the finished supports from SP-19 pontoons simultaneously with the driving of piles is produced. And this sector was entered in the schedule.

- now there is not in one sector delays. Bridge will be ready

before the appointed time! - I finished my report.

Vatutin strongly shook my hand:

- the military council of front will not forget the labor heroism of bridge builders. Give our large gratitude to all of them !

During this day the party meeting of our directorate of the military reconstruction works in the evening took place. I briefly reported to communists about the operation on bridge, about my conversation with N. F. Vatutin, communicated his gratitude. In their appearances the communists assured, that they will do everything for the execution of the combat assignment.

Reception into the party was the second question of the agenda of meeting. Chairman also read the statement of the chief engineer of the directorate Grigoriy Isaakovich Zingorenko. Daring, decisive, steadfastly enduring all difficulties of front life Zingorenko at the meeting got excited, when he told his biography. But his biography was interesting. During the years of civil war Zingorenko voluntarily joined the ranks of the Red Army and fought in the rifle brigade of Kiev fortified district. After war he studied in the Kiev polytechnic institute. While a student, he worked as foreman. The large railroad bridge, exploded by White Guards, was restored. Having finished

Institute in 1926, he became engineer-bridge builder. He worked in Kiev.

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With his participation the railroad bridge on the Posol', now destroyed by enemy, was raised. War prevented Grigoriy Isaakovich from finishing building Navodnitskiy highway bridge. From his first days Zingorenko was in the railroad troops/forces. We all knew him as the most experienced bridge builder-designer, an excellent person. Meeting unanimously made a decision to accept G. I. Zingorenko into the party.

The communists had just gone to their sectors, when air alert signal was given. The new raid of Fascist aviation was begun. On the target approach the Hitlerites were met with dense fire of our ack-ack guns. For enemy aircraft it was nevertheless possible to burst through to the bridges. Several bombs lay near them, and one hit the support.

When it rains it pours. Barenboym came running, pale, with face distorted by suffering, moves his bluish-black dense eyebrows, wants to say something but cannot.

- What did happen?

- Is killed Yevgeny Platonovich Kabotin.

- I knew quite well our best commander of the platoon of piledriver operators. Only yesterday he told me, after flashing his mischievous eyes:

- Do not grieve, comrade General, piledriver operators will not fail.

And thus merry Zhena Kabotin no longer is with us.

Telephone call from Darnitsa:

- Station on fire. Trains with fuel and the ammunition burn.

I immediately directed there rescue unit. Simultaneously with our bridge Germans bombed Darnitsk unit. Several bombs fell to the loaded tanks and the armed cars. Near the tanker-car trains at this time hospital train stood. Fire and fragments of the torn shells threatened the wounded. Rescue operations at the station were conducted by the subunits of the 7th railroad brigade. Senior Lieutenant O. V. Kuznetsov rushed to the steam powered switch engine

and ordered engineer to immediately move into a safe zone the train with the ~~casualties~~ wounded. When hospital train left, Kuznetsov crawled up to the car with the torn shells and disengaged it from the train. Steam locomotive removed the undamaged cars to emergency tracks. Simultaneously soldiers rescued tanks with the fuel. In order not to allow explosion, they opened hatches, rolled them away further from the fire.

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In one of the headquarters cars the banner of battalion stood. Protected unit color private N. N. Fadeyev. Hostile bomb also hit this car. It wounded and contused soldier. He lost consciousness. Car caught on fire. When Fadeyev came to, the fire had already approached the banner. Overcoming pain, soldier crawled up to the banner, he forced it against breast and tumbled out of the car encompassed in flames. To the burned, bleeding soldier Lieutenant N. G. Shmelev and sergeant P. K. Yelkin ran up. Fadeyev, after kissing banner, handed it to his commanders and again lost consciousness. They immediately sent him to the medical battalion.

For this feat private N. N. Fadeyev was rewarded with the Order of the Red Star.

Works on bridge meanwhile approached toward the end. All sectors accurately were entered in the work graph. Builders worked with the enormous enthusiasm. Countdown went literally by minutes.

As I already said, simultaneously with the construction of the bridge across Dnepr our brigades restored Kiev junction, and also liberated stages from Kiev toward Fastova and Korostenya. This entire complex of tracks had to be working the day ~~the day~~ the bridge was ready. Thus, to trains was opened direct route from Darnitsa to the front line. With the work of our soldiers were satisfied the TsK of the party and the government of the Ukraine, the military council of the 1st Ukrainian front.

Once from Moscow arrived the special train, which delivered to the railroad troops/forces of the 1st and 2nd Ukrainian fronts machinery and scarce materials. With this train arrived I. D. Gotseridze and S. V. Gusev - new commander of the southwestern road. His predecessor P. M. Nekrasov, as it is known to the reader, died in the environs of Kiev in 1941. Earlier Sergey Vasilyevich headed the central military mobilization, and then operational-working directorate of NKPS.

To become acquainted with the low-level bridge Gusev arrived together with Gotseridze. Nagging, as future master, he inspected

nearly each of its units. At the end of the examination/inspection he said:

- bridge will limit the capacity of sector. There is no automatic blocking.

For the first time I heard, that in field conditions it is necessary to place the automatic means/facilities of signalling.

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Required them of us neither the leaders of NKPS nor command element of front, these conditions were not provided for by the technical rules of the restoration of front roads. Yes we did not have available this equipment - Germans destroyed old, new to us did not come. We did not revive also locomotive and car depot - there was no time. Before us was placed one task: to ensure in the restored sectors the passage of 12 pairs of trains in a 24 hour period with a velocity of 30 kilometers an hour. This task was primary. After its execution in the presence of forces and time we returned to our sectors and reinforced them. Equipment buildings and civil/civilian structures/installations built already after us local railroad workers - such was the order. All heads of the NKPS and commanders/chiefs of its roads knew it and did not demand more from

us.

For S. V. Gusev it was necessary to lead the operation of the sectors and bridges restored in order. Naturally, Sergey Vasilyevich wanted to obtain immediately the main line, put into operation completely. He desired to consider neither the operational situation at the front nor the possibilities available to us. I proposed to him:

- Let us equip bridge from both sides with telephone communication. Then it will be possible to pass as many trains as desired.

- You are not operating personnel and cannot understand that you are proposing yesterday's technology.

- Other communications we do not thus far have available !

But Sergey Vasilyevich had his way. All my reasons produced on him no impression.

Into our dispute mixed I. D. Gotseridze:

- you, my dear man, buttons from Kabanov you do require? In

order to sit in his office and to press them as in our people's commissariat. Here that will not work!

- I will not accept bridge in operation in this form ! - reiterated Gusev.

Gotseridze boiled:

- German is breaking through to Kiev. We cannot convey the tank troops/forces across the Dnepr, and then - give him the automation ! He complains we are not restoring the road well. You do not have feeling of measure !

Gusev, after becoming rumpled, answered:

- The matter not only concerns automation.

but - what is at stake then? - asked Ilya Davydovich.

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- is necessary the high-level bridge, capable of maintaining/withstanding spring floating of ice. Low-level bridge will be broken by ice. What will we then do?

Now I understood that Gusev supports the opinion of the specialists of the NKPS! The reader remembers that still in summer, when was solved the question, how to build the bridge, the heads of people's commissariat insisted on its high-water version. I began to explain to Gusev:

- Sergey Vasilyevich ! For the restoration of high-water Darnitsk bridge we have already been prepared. Let us begin the works immediately, as soon as we open movement across the low-water one. There is is sufficient time. Winter is ahead. Before spring let us build a reliable bridge. It will serve you a minimum of ten years.

Gotseridze became agitated. He asked:

What do you say now dear fellow?

- I can't accept the low-water bridge. With a structure like this it would be imposssible to use the [rail]road - he insisted stubbornly.

The argument dragged on and became rather unpleasant. There remained only one way for me to resolve this - turn to the Central

Committee of the Ukrainian Party. I told Gusev.

Gotseridze supported me. I phoned the Central Committee and described our disagreements. I requested that railroad specialists be called in for a qualified analysis of the matter.

At the appointed time the three of us - Gusev, Gotseridze, and I - traveled to the Central Committee. They received us immediately. The director of the transport branch of the Central Committee and two railroad specialists unknown to me were already waiting for us. They reported to me and I repeated the content of the telephone message. Then Gusev stepped forth. He expanded his demands on us. Now Sergey Vasil'yevich asked not only that we immediately begin construction of the high-water bridge and install the automatic equipment on the low-water bridge, but that we also restore all the depot buildings, including the stations and service buildings on the sections.

Those at the conference exchanged looks of astonishment.

None of those who spoke supported Gusev in his demands. Yet Sergei Vasil'yevich persisted. Finally the director of the transport brach of the Central Committee had had enough:

- We are through trying to convince you. If you can't use the

low-water bridge and restore sections of the railroad, then you are going to have to ask the NKPS to send us a new railroad director.

On this the conference ended.

After conference Sergey Vasilyevich no more claims to us presented. We worked with him well. The southwestern road he intelligently led many years. But during that day I felt myself before Gusev uncomfortable. Indeed he suffered, he survived. But could I act in another way? No.

Toward evening I returned to the construction. In my excited face cold autumnal wind blew. Black Dneprovsk waves with the noise lapped against the supports of bridge. Tens of electric lamps merged into enormous glowing bands. Above the river the shadows of the working people everywhere flickered. The discordant knock of skid hammers, the gnashing of the moved rails and the ringing of the shovels cutting into the ground was heard. The sounds of construction returned me to reality. To the opening of movement the days remain. The completing works are progressing at full speed. Together with the second continues to work the first shift. Did not leave to rest the townspeople. They finish pouring the earth/ground on the right-bank approach, they help soldiers to unload barges with the bridge beams and the rails. From the dark the thickset figure of the commander of

the 44th battalion Major K. A. Stepanov unexpectedly emerged. Filling approaches and laying track is charged to his people. There is still much work in the battalion. Right-bank approach is only half ready. I ask the Major:

- In time you will be manage?

- We will manage. People from the left shore now will arrive. There everything is done. Kievians in the morning will aid.

From the command post of Lieutenant Colonel Vikhorev I got in touch with duty dispatcher L. B. Lange. He reported, that for 18 hours all span structures, except one 23-meter, were set in place. Installation also of this structure takes place. They began the fitting of bridge beams. Following the carpenters the civil engineers place rails. In the first and third sectors the shoring up of supports is conducted. Stone is delivered without interruption. Lange confirmed that the left-bank approach was completely ready.

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Together with Stepanov I sit down on the motor boat and we leave for the island. On the cape stands Lieutenant Colonel V. G. Belyavskiy. He commands unloading rails and bridge beams. After

noting me, commander approached, he reported:

- bridge beams and rails were all brought. Attachments - in place!

From the barge come Dain and Leonov. They smile. I guess, that according to the schedule they were the first to prepare their sector for laying of the upper roadbed of bridge. I thanked them for a good service and went to the left shore. I found Barenboym, Saprykin and Uglitskiy. They about something loudly argued with the author of project Ivolgin. Barenboym reported:

- Comrade General! In the morning all basic works will be completed. We argue with Ivolgin. We prove, that it is not necessary to shore up supports with stone completely. But he insists on the complete filling and does not make us any allowance.

- Reasonable requirement! - I supported Ivolgin. - We are not guaranteed from the whims of the elements. I ordered Barenboym: - at night increase groups. Bridge must stand reliably.

No one of us slept on this last night before the delivery of bridge from 19 to 20 November. Yes how could one really sleep. At Darnitsa station stood ready, under the steam locomotives, trains

with the tanks, self-propelled guns and the heavy artillery. Immediately they should be sent across to the right shore to meet the enemy advancing to Kiev. In the morning, as soon as barely began to gleam light, I with Zingorenko, Ivolgin and with the commander/chief of sectors began the detailed examination/inspection of each unit of bridge. In several places it was necessary to reject rail track. Soldiers following us here strengthened the weak, in a hurry layed components. By noon they had time to produce the running-in of bridge. Settling in the supports proved to be within the limits of norm. This somewhat calmed us down, removed tension. The first troop train had to proceed across the bridge at 14 hours. At 13 Hours they retracted *entire construction debris, finished finishing works*. I ordered the commanders of military subunits and the commanders of working special-formations to form personnel on the left bank near the platform specially erected for this case. Band began to play. Before the bridge on the tracks ia a wooden arch with colored band, stretched across the tracks. The arch gleamed white.

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On the platform climbed the member of the military council of front General N. G. Kal'chenko, the first secretary of the Kiev regional committee of the party Z. G. Serdyuk, the deputy of Peoples Commissar lines of communication to I. D. Gotseridze, the commander/chief of

the southwestern road S. V. Gusev, the representatives of the Soviet and party organizations of city. To the meeting hundreds of Kievians arrived.

All looks are directed towards the bridge. Now soldier N. K. Chalyy waved his hammer and drove in last skid. I opened meeting. The warm words of the commendation to builders was pronounced by Serdyuk, Kal'chenko, Gotseridze. Our soldiers and officers appeared. Solemn minute advances. All, standing on the platform, go down on the tracks and approach the arch. Vikhorev supplies scissors to Serdyuk - band is cut. Bridge is opened. Is heard loud "hurray" ! Band plays flourish. Powerful steam-locomotive whistle - and past the builders passes to the front the first train with the tanks. Tankers from the platforms gratefully wave with hands to the builders of bridge. For a long time after the termination of meeting I with Zingorenko looked at our creation, we were not able to leave it. Grigoriy Isaakovich opened his cherished notebook:

- According to my calculations, it turns out, that we set a record! Not one country during the years of war built a bridge with this speed. The average/mean tempo of the construction of our bridge readed 81.5 m in a 24 hour period.

Moving ahead, I must say that the Americans at the end of the

war on the construction of the bridge across Rhine near Duysburg achieved a speed of 56 m in a 24 hour period, which was the record of the army of the USA.

However, - Grigoriy Isaakovich, what helped us to attain such high tempos?

- First of all, the great patriotism of our people, their selfless devotion to the party, people. Also mass labor heroism. This, perhaps, the main thing. Entire rest can be depicted in the form of formula. Its constitutes: comprehensive preparation/training, wide front of works plus the combination of operations/processes, the excellent training of personnel. And all this, multiplied by enthusiasm !

- And where is technology? Introduce it as a component into your formula !

- Agreed, I left it out. I will now report to you, how much is invested.

Grigoriy Isaakovich turned the page of notebook and were named figures.

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In all on the construction of bridge without the preparatory works were spent 48 thousand man-days. Consequently, to each finished linear meter of construction was required 45.3 man-days. Daily worked up to 2500 restorers.

After listening these numbers, I smiled:

- I here you have not everything considered.

- That's interesting, what?

- Courage of people, who worked under the massed bombings, sleepless nights in the wind and under the cold autumnal rains and the snow, sweat of our brows, and the main thing is blood of those killed and wounded! Write into your notebook also the enormous work of our closest assistants: political workers, agitators, newsmen and all communists and Komsomol members, who carried along people to heroic deeds by their example !

- I will necessarily write and will maintain my records. It can be, sometimes they will prove useful. War will end, we will meet, will read, will recall these days!

We did not think then that we would have the occasion to write memoirs, and these, meager, short recordings on the gray pages of front notebook will become priceless assistants. No, we did not think then about this !

At the same time, conversing at the bridge, Grigoriy Isaakovich named the overall volume of the carried out works. 1092 piles alone were driven in. On all wooden details more than 5 thousand cubic meters of lumber were required. Were placed metal constructions with total weight of about 800 tons. This metal covered 133 spans. The overall length of bridge was 1059 meters. This is what our temporary low-water railroad bridge was! And when, dear reader, ~~the~~ a train, which carries you into a distant or close route, crosses a similar fundamental construction, remember with a good word its creators ! A bridge is not only engineering, but also heavy work of thousands of people!

I, until now, remember verbatim the "tale about the military railroad workers", which composed in our honor Arkhangel'sk national narrator Vasilyevna Antonova's Olympiad:

You courageous hero-railroad workers, selfless Soviet patriots!

To you neither cold nor heatare terrible. To you are not terrible snowstorm nor dark nor artillery fire nor Fascistbombing.

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Oh you are brave soldiers, how the world already marvels at you. No, in history there have not been written such feats, such glorious deeds so as to erect bridge in 13 days across Dnepr-river, yes wide. Already there are many brave soldiers and builders. You gave routes of approach to glorious Kiev" [1].

FOOTNOTE [1]. Archives MO USSR, f. PO Upr. zh d. of troops/forces, pub. 121766, d. 20, l. 251. ENDFOOTNOTE.

But how was provided front with all that was necessary in the days of the construction of low-level bridge when, indeed did combat on the right bank did not abate not for one hour? Within this time our units restored, without change of gage to Soviet track, one main track of the sectors of roads from Kiev toward Fastova and Korostenya. Hitlerites with the retreat discarded a large quantity of rolling stock. We used it. Supplies, which go from the deep rear to the front, were unloaded at Darnitsa station. Motor vehicles from there took them on the floating highway bridge across Dnepr and delivered them to right bank. Here they were transferred onto the

captured cars and were directed to the front. By 20 November, i.e., to the planned period of putting in operation the bridge, the 14th railroad brigade had time to restore and to change gage from the West European to Soviet track the second main track of road to Fastov, and the 19th railroad brigade did analogous work to Kladievo station, which is 60 kilometers from Kiev. All this gave to us the possibility simultaneously with the operation of bridge to organize the delivery/procurement of supplies to the front without the overload from the Soviet rolling stock. Only in November and December of 1943 across the bridge to the front more than 65 thousand cars proceeded.

After obtaining considerable reinforcements, the troops/forces of the 1st Ukrainian front passed to the offensive and completely returned the lost territory. The attempt of the Germans to hold out at the Dnepr, whose fortifications composed the basis of eastern bank, failed. Thus were completed continuing from 12 October through 23 December, 1943, ~~those~~ the operations in the environs of Kiev. For the provision of combat operations of the troops/forces in these operations/processes the low-water railroad bridge constructed by us across Dnepr played a large role.

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But front and national economy already awaited from us

high-level bridge. We planned to build it 20 meters upstream from the ruins of Darnitsk bridge crossing. The construction of a new wooden structure from round timber was provided for by project. The tamping of piles was planned at the depth of 4-5 meters. The right-bank fairway of river it was planned to cross with four span structures. Length of each span was 55 meters. Left-bank fairway was crossed with 27-meter span structure. The middle part of the construction they decided to lay with span structures with a length of 23 meters. The total length of bridge was 1150 meters. Bridge was designed for 5 years. I assigned the cleanup of the river bed of river of fragments of Darnitsk bridge to the bridge train No 434 and the divers of Epron.

In the beginning of December I and G. I. Zingorenko were called to Moscow by the Peoples Commissar of lines of communication. He examined our design of Kiev high-level bridge and said:

- It is necessary to construct the bridge, worthy of the capital of the Ukraine - Kiev! Your project does not suit us. Refine it together with the engineers of GUVVR. Bridge must live not five, but a minimum of ten years!

Several days we reexamined project together with the specialists for the bridge administration, GUVVR, which N. A. Kholin led. We

increased the depth of the tamping of piles from 4-5 to 8 meters. The frames of supports were designed from the beams, impregnated with wood preservatives. Ice-cutters were increased. They gave considerable attention to the appearance of bridge. Designed input porticoes and beautiful handrails.

Peoples Commissar examined new version and affirmed it. In the middle of December we started up construction. Lumber was prepared at the previous settled place near Darnitsa. Logs for us were required with a length from 12 to 15 meters, with the diameter not less than 26 centimeters. Such trees were scarce. It was necessary to find them, which took a lot of time and effort. Therefore the stocking up of parts and units occurred slowly.

Works were conducted on a wide front. Construction was broken into five sectors: three - on the axis of bridge itself, one - on the disassembly of Darnitsk and last, the fifth, on pouring of subgrade for the approaches. The 5th sector was one of the most labor-consuming ones.

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It was necessary to take out from the reserves and to deliver to the appraoches 100 thousand cubic meters of the earth. These works

conducted the 44th track battalion of familiar to the reader Lieutenant Colonel Stepanov. The detachment of I. Yu. Barenboym, the 33rd bridge battalion of Major Dain and the 14th bridge battalion of Lieutenant Colonel Vikhorev raised bridge. As construction commander of Peoples Commissar assigned me, as chief engineer - G. I. Zingorenko. We, as before, for the more operative management, organized supervisory control.

On the construction of high-level bridge our people again suffered almost all the same difficulties, as on the construction of low-water. They worked in the icy wind, under the bombings, but with the same undiminishing enthusiasm and courage. The soldiers of the 3rd company of the 33rd bridge battalion especially heroically worked. Commanded company young, capable officer Senior Lieutenant Aleksandr Mikhaylovich Men'shov. Commander assigned the most complicated and most responsible operations to his company.

For life in our memory the new-year night of 1944 remained. On this night the Hitlerites, obviously, decided "to congratulate" us with the holiday. At 23 hours 45 minutes above the construction the first wave of hostile aircraft appeared. After it the second and the third. Cruel bombing was begun. At this time the second shift was working on the bridge. There was no cover, and no one departed from his work site. One of the bombs exploded in the vicinity of the 2nd

company - 12 people were killed, 22 were wounded. Company commander lieutenant of tech. services M. I. Monastyrenko together with the squad leader sergeant Zagrebel'n rushed to the wounded comrades, they carried them out to the bank, rendered to them first aid. Monastyrenko immediately organized the shipment of casualties to the hospital.

Much machinery and materials were sunk. By the direct hit of bombs was brought-down on right coast the machine-gun tower of the air defense of bridge, ice-cutter was broken. On the low-level bridge Fascist aircraft rendered inoperable two supports. One of the damaged supports inclined. Trusses together with the transient unit of the construction were displaced by half meter to the side. The movement of the trains across the bridge ceased. I threw all forces to the rescue of low-level bridge. In the morning it again was in operation.

In spite of attempts at the enemy to destroy the construction of high-level bridge, by 20 February it was ready for the reception/method of trains. 66 days were required for its erection.

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A good gift obtained Kiev from the military railroad workers.

Past 1943 was characterized for our railroad troops/forces and special-formations by the wide scope of the restoration of steel main lines. Works were conducted on 20 roads. During the battle for Dnepr alone the military railroad workers of the Red Army introduced 12 thousand kilometers of routes/paths into the formation/order, and alone in 1943 - more than 18 thousand kilometers. The tempos of restoration increased 3.5 times, increased the quality of works. The first train to liberated Kharkov arrived after 5 days, into Bakhmach - after 7, into Kiev - after 14 days. Periods, I will boldly say, not previously seen. Moreover, at this time are included also the works on the reactivation of bridges, viaducts, overpasses.

Military railroad workers and the workers of the special-formations of the 1st Ukrainian front on the average in 24 hours made operational 14.5 kilometers of tracks. In all in 1943 we restored almost 6 thousand kilometers of railroads, fulfilled 1.5 million cubic meters of earthwork, constructed more than 102 kilometers of new lines, revived 762 artificial constructions with an overall length of 18.5 kilometers.

I do remember, at the end of December of 1943 I was visited by M. B. Yakhnovich:

- Do you want, Pavel Alekseyevich, to know what the allies write

about us?

It gave to me the translation/conversion of the periodical article of the English specialist, of railroad worker Whitworth, who wrote the following: "real difficulty for the Russians will arise, when rapid offensive is begun and large areas will be taken back. Offensive during August and September of 1943 can create still greater difficulties for the Russian railroads, than the retreat of 1941-1942".

Silently I returned to Yakhnovich the sheet of paper. Mark Borisovich said:

- The bourgeois scribblers have no luck with predictions. Again they sat down into a puddle.

- They do not know the force of our socialist order. Before one's eyes our people advance, technology is renewed, and all these things seemingly escape the attention of the western scribblers.

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Toward the end of 1943 in the composition of the Soviet railroad troops/forces there was sufficient first-class civil engineers,

carpenters, erectors, crane drivers, welders. Unrecognizable became also the technical preparedness of brigades. The plants of main military reconstruction administration supplied to us diverse high-productivity vehicles and machinery, provided us with ewuipment, finished constructions/designs. All this gave to us the possibility to restore route/path, bridges, communications/connection and water supply at high tempos.

Working on the restoration of bridges in Kiev, we attentively followed the combat affairs of the military railroad workers of the 2nd and 3rd Ukrainian fronts, which under the most complex conditions restored bridges across Dnepr in its lower flow. The railroad troops/forces of the 2nd Ukrainian front raised bridge in Kremenchug. Colonel A. N. Tkachev commanded them. Low-water highway bridge crossing for the rail transportation was here adapted. Trains following the advancing/attacking armies went to the front. This in many respects helped our troops/forces to hold retain bridgehead on right bank of river in the area of Znamenka and Koristovka, and then to pass to the offensive, as a result of which Kirovograd was liberated. In 17 days on the highway bridge to the right shore of Dnepr more than 2 thousand cars with the ammunition and the military technology passed. Temporary/time railroad bridge was restored beside the old destroyed bridge with an average/mean tempo of 30 m in a 24 hour period.

The troops/forces of the 3rd Ukrainian front forced the Dnepr in its lower flow and on 25 October they freed Dnepropetrovsk. In the course of further offensive the bridgehead on right bank of river was expanded. In order to ensure the advancing/attacking formations with all that was necessary, the command element of the 3rd Ukrainian front demanded from UVVR-5 (commander/chief Major General of the technical troops/forces N. V. Zverev) to urgently place floating railroad bridge. In 7.5 days on the bridge the trains already went. During 27 days alone across the bridge proceeded 247 trains with military supplies.

end section.

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WITHOUT OPERATIONAL LULLS.

During December the troops/forces of our front finally freed the Fastov area. The reader remembers, how here during July 1941 heroically they perished with their detachments the commissar of the 77th road battalion A. A. Galafeyev and the company commander of the 79th battalion Senior Lieutenant L. A. Krivtsov. All soldiers and commanders of UVVR-3 knew well the details of this unequal combat. With new force it arose in the memory, when we returned to Fastov. Our mine planters decided to avenge the enemy for the blood of their comrades. And soon such an instance occurred. Hostile armored train daily approached close to the front line, fired on the positions of our divisions and Fastov group. The 14th brigade restored the group. Artillery raids interfered with normal operation. The chief of staff of brigade Major V. G. Izmailov, the commander of mineblasting platoon senior lieutenant of tech. services F. M. Myasnikov with the aid of the engineer of the department of the obstacles of the control senior lieutenant of tech. services G. M. Tatarinov decided to

establish on the route/path of armored train booby trap.

In the Fastov area of Tatarinov together with Myasnikov they looked out the favorite area of parking of armored train from the trenches of infantrymen. Myasnikov helped Tatarinov to select from the volunteers of his platoon the best soldier-mine planters. Officers several days prepared soldiers for this operation/process.

Finally on a dark/nonluminous blizzardy night mine planters made their way to the railroad. They placed the intensive antitank mine into the mound, on the spot of the parking of armored train.

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Enemy did not reveal/detect miner planters; they happily returned back into the trenches of infantrymen and they began to await dawn. Precisely with German accuracy, on the hill the smoke of steam locomotive appeared. Armored train at the high velocity hurried to its constant parking area. Passed one second, another second .... The vicinity was shaken by an enormous explosive force. The armored steam locomotive tumbled over on its side, all the platform cars were thrown from the rails and were damaged. On the armored train our divisional artillery opened fire/light.

So mine planters avenged Hitlerites for the death of their comrades during the July days of 1941.

On the blowing up with our mines of German armored train on the next day there were forwarded reports of Soviet information bureau. Some details of this episode were published in the newspapers.

Our brigades meanwhile began the restoration/reduction of the liberated sectors of Vinnitsa railroad. On the southwestern trunk line it bordered on Novograd-Volynskiy, Zhitomir, Fastov stations.

During these days to take control of the Vinnitsa road there arrived commander Mikhail Ivanovich Koptelkin. From the first day he actively engaged in work. Together with the officers of the administration he left for the head units and the sectors. He established communications/connection with the local Soviet and party organizations. Mikhail Ivanovich mobilized the railroad workers and the local population for the restoration/reduction of depot, stations, technical buildings - all those facilities, with which our troops/forces were not concerned. Koptelkin first of all did everything so that the railroad workers could work under normal conditions. Assistant stationmasters, as a rule, huddled in the made of planks, cold quarters/premises or in the bodies of unfit cars. Equipment did not work, people froze. Mikhail Ivanovich with his

brigades put in order many destroyed buildings of stations, heated them, transferred into the well-organized rooms of the people on duty and the station dispatchers.

Energetic, thoroughly investigating the affairs of road, Koptelkin exercised great authority among the military and civil/civilian railroad workers ....

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The winter of 1943/44 years did not give the enemy a break. Soviet Supreme High Command without considerable pause between the two campaigns deployed large-scale offensive operations in the zone from Leningrad to the Black Sea. The most important with respect to their results was the Korsun'-Shevchenkovskiy operation/process of the 1st and 2nd Ukrainian fronts. Operation/process was begun on 26 January. Ten divisions and one brigade of Hitlerites were surrounded. Combat for the annihilation of the surrounded grouping raged. Spring in that year to the Ukraine arrived early. Thaws even during January were begun. Dirt roads became unpassable. The highly worn, during the time of the continuous offensive, motor vehicles continually malfunctioned, they bogged down in the mud. Soldiers and local residents for tens of kilometers brought ammunition and rations on their backs. Over the soggy chernozem, files of loaded ox teams

stretched to the front line. More reliable communications were necessary for the advancing/attacking armies.

The railway from Fastov to Belaya Tserkov' we put into order by 15 January. Now all efforts were exerted to extend it nearer to the front, to Mironovka. But in Mironovka there still raged battles and to approach the main trunk line was impossible. It was put into operation only on 20 February. At the same time the line to Mironovka was being restored from the direction of Tsvetkov by the railroad workers of the 2nd Ukrainian front. The combat support of our troops/forces was sharply improved. This work was being supervised by the commander of the 7th railroad brigade N. I. Novosel'skiy and my deputy commander V. S. Dmitriev.

After the rout of the Germans near Korsun'-Shevchenkovskiy was completely cleaned up the belt main trunk line on the right bank of the Dnepr from Fastov through Belaya Tserkov', Korsun'-Shevchenkovskiy, Znamenka, to Dnepropetrovsk inclusively. Enemy was finally thrown back from Dnepr at its mid course.

Simultaneously with conducting of the Korsun'-Shevchenkovskiy operation/process the armies of the right wing of our front launched a strike/shock in the direction of Rovno, Lutsk and Shepetovka. On 2 February Soviet soldiers liberated Lutsk and Rovno, and on the next

day the large/coarse railroad junction of Zdolbunovo, and on 11 February - Shepetovka. One after the other were cleaned of the enemy all new railway sections.

We restored first of all the main trunk lines, which created favorable conditions for the maneuvering of the troops/forces and the delivery/procurement of everything necessary to the front line. The 19th railroad brigade ensured the operational state of the Kiev-Korosten'-Sarny-Kovel' trunk lines.¶ Page 250.

Simultaneously the brigade had to restore/reduce the lateral sections of the railroads adjacent to this trunk line. On these main trunk lines the soldiers and the officers of the 19th brigade encountered the war. Here during the retreat of the Red Army they had set up obstacles. Here to them were familiar each station and each section of road.

The 14th brigade followed the Kiev-Fastov-Kazatin-Zhmerinka-Grechany-Kopychintsy-Byala-Chertkovska trunk line. This main trunk line was still not completely liberated. Just as soon as sections of road were liberated from the enemy the brigade had to put them into operation together with their branches.

We supplied the 7th railroad brigade for the

restoration/reduction of an enormous section of roads. It included all of the following: Fastov-Zhitomir-Novograd-Volynskiy-Shepetovka-Ternopol'-Grechany, Kazatin-Berdichev-Shepetovka- Zdolbunov-Rovno and Zdolbunov-Dubno-Belaya Tserkov'-Mironovka.

The troops/forces of our front attacked/advanced all during March and April. The railroad battalions paved the way following the large units/formations moving towards the West. The spring thaws and floods as before kept the dirt roads in an impassable condition. We managed with difficulty to transport building materials to the sectors being restored.

During these days the 60th army of General I. D. Chernyakhovskiy, after meeting with powerful/thick resistance of the enemy, could not while on the move take control of Ternopol' and surrounded this fastened/strengthened strong point of the enemy. For the whole month battles raged for the annihilation of the surrounded enemy grouping. For the delivery/procurement of replacements, ammunition and fuel to the troops fighting here the military council of the front ordered me to urgently restore/reduce the section of road from Shepetovka to Ternopol. The extent of the section was 152 kilometers. Along it there were no improved automobile roads Whatever, and the dirt roads were not passable. It was not possible

to get to the section - neither by foot nor by transport. Moreover, the Germans had completely destroyed it. I directed the 7th brigade to put this section in working order. The line from Shepetovka to Ternopol' as before the war was technically weak. The reader probably remembers that at the beginning of 1941 the 5th brigade had begun to reconstruct it, and had even started the construction of alternate routes and a bypass around the Ternopol' junction. But it had not been able to to finish it. Now the entire section lay/rested destroyed. Bridges and pipes/tubes had been blown up.

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To deliver materials from the "field" to remote sections of roads was impossible - it was a quagmire.

The situation in the section had become critical. There were almost no materials for the superstructure of the route/path and bridges. The soldiers for a distance of several kilometers over the mud on their backs dragged logs from the forest, and dismantled wooden structures. The supports of bridges were erected from the railroad tie cages/cells. For forgings there even went the iron bars from the prison in the city of Lanovtsy. They carted metal away from all the surrounding blacksmith shops. Bolts for the fastening of rails were delivered by the aircraft of our small aviation fleet. The

pilots dropped them along the road sections in boxes. Pilots M. V. Shnarevich and L. A. Dubatov flew in any weather. Coverings were in short supply. They decided to make them from oak, and to pair the wood covering with a metallic covering. This limited the speeds of the movement of trains, but it made it possible to gain time. The rails on two sections of roads were reinforced in this manner. Soon it was possible to use metallic coverings and the wooden ones were taken/removed.

The period for the restoration/reduction of this line specified to us by the military council of the front was too short. However, from the first day it became clear that under such severe conditions the brigade would not be able to do the track work specified in the days allotted with their own forces alone. Assistnce was necessary. They mobilized the local population. And nevertheless there were still not enough forces.I advised Novosel'skiy to turn to I. D. Chernyakhovskiy for assistance:.

- He will understand us, he will help!

I had not known General Ivan Danilovich Chernyakhovskiy forjust one year. Long before the war we were even neighbors in Novobelitsa. Chernyakhovskiy commanded a tank regiment, I - a railroad regiment. We got to know each other there. Ivan Danilovich responded to our

request and put at our disposal the 7th brigade of approximately 400 men. Because of his aid we were able to put the section into operating order before the appointed time, within 13 days. The average rate of restoration was 11 kilometers of finished road per day.

The second railroad main trunk line, which approached Ternopol' from the direction of Grechany, was broken by the Germans in the Podvolochisk area. On the the section of road between the stations of Volochisk and Podvolochisk there flowed a small river, the Zbruch. Along it there passed the old border between Poland and the USSR. The bridge over the Zbruch was high, with a length of 45 meters. We knew that the Hitlerites would not leave this structure intact for us, and therefore we had previously planned for its restoration/reduction.

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On 5 March in the headquarters of the front I learned, that Podvolochisk had been liberated. They decided to immediately carry out air reconnaissance of the bridge. Together with the pilot Dubatov there flew a specialist from the department of technical reconnaissance of our administration senior lieutenant of tech. services N. V. Golubin. On approaching the bridge Dubatov selected a convenient area/site and landed the aircraft. The area/site was

located within one-and-a-half kilometers of the bridge, and Golubin intended to reach it on foot and thoroughly inspect it . But hardly had the aircraft landed, when the Germans opened artillery fire on it. Fortunately, the pilot had not turned off the motor. The aircraft took off and in low-level flight flew away to its base. Golubin had not not fulfilled his mission.

On the second day with the pilot Dubatov engineer major Anatoliy Alekseyevich Zemlyanitsyn flew out on reconnaissance. The weather was slightly cloudy ans warm. The enemy aviation at this time did not manifest any particular activity. Dubatov confidently flew his aircraft in the direction of of Ternopol'. And in the area of Borki Velikiye station the aircraft turned to the Ternopol'-Podvolochisk railroad line and approached the bridge along it. For a better survey of the terrain the pilot gained altitude to 150 meters. It was quiet all around. Without flying the 10-15 kilometers to Podvolochisk, the crew spotted soldiers on the routes. At the Podvolochisk station steam locomotives building up steam. The river came into view under the wings. Over the river - there was the blown up bridge. Zemlyanitsyn inspected its remains from the air. Suddenly next to the aircraft shells began to explode. Dubatov glided down steeply, brought his aircraft close to the earth and above the roofs of the city houses quickly got out of the fire. Looping along a deep ravine, the pilot lost orientation. His fuel was running low. They decided to

fly strictly to the north, but they were quite sure, that this was not the route to their territory. In the field they spotted a lone woman, they landed and questioned her about the nearest populated areas.

Riddled by shell fragments, on the last drops of fuel the aircraft returned to its airfield. We counted 13 holes on the fuselage and the control surfaces. Thus ended our second attempt to reconnoiter the bridge at Zbruch. These failures were due to the incorrect information, obtained by me at the administration of the front rear. Our troops had not liberated Podvolochisk, but Volochisk! Podvolochisk was still occupied by the Germans. Only after several days the troops of our front freed this city.

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Now for reconnaissance of the bridge and the section Colonel Brykin flew out. At Podvolochisk station, conversing with one of the urban inhabitants, he heard the following from him:.

- Recently in broad daylight a "Rusfaner" (an all-wood Russian aircraft) bombed the city. Several Germans were killed and wounded.

Serafim Vasilyevich was interested:.

- And you did not note the number of the aircraft? !

- I noticed, it was eleven! - answered the narrafor.

It was our aircraft. But indeed Dubatov and Zemlyanitsyn at the most had only two handgrenades. Their crew did not expend them. Then who was it, that bombed the Germans? S. V. Brykin became interested in this story and this is what he found out. When our aircraft flew above the roofs of the city, the German tankers saw it and opened fire. But the aircraft maneuvered, and the shells fell on Fascist positions.

When on the next day I reported the results of the reconnaissance to General N. T. Kal'chenko, then I also described the incident with our aircraft. Kal'chenko laughed heartily about the Germans, but he said that he would firmly ask them, who had incorrectly informed us about the operational situation at the front.

By the end of February the troops/forces of our front concluded their last preparations for the Proskurov-Chernovtsy offensive operation. On 24 February I reported to the front commander General N. F. Vatutin the draft of the long-range plan of the

restoration/reduction of roads. Before the report was given to the commander the commanders/chiefs for the administration of front rear and VOSO (military roads) examined and approved it. Nikolai Fedorovich before the war worked as the chief of staff of a Special Kiev military district and he excellently knew the railroad net of the western areas of the country, its capabilities, the technical development of each junction and section. After becoming acquainted with the draft of the plan, he in principle agreed with it, introduced his corrections and approved it. Saying goodbye, Nikolai Fedorovich warned:

- Upon reaching the L'vov road do not disperse your forces, and do not attempt to take all sections and stations. First of all restore the main approaches to L'vov and the line from L'vov to Peremyshl'.

I did not think then that this was my last meeting with the commander.

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Several days later, on 29 February, N. F. Vatutin was mortally wounded by thugs - Ukrainian bourgeois nationalists and on 15 April he passed away. The news of the wounding and the death of the dear

General spread along the front with lightning speed. It was as if we had become orphans. Seeing more than death in this, the soldiers and officers did not have the strength to hold back their tears. He had been a most charming man, a man of high spiritual culture, one of the most talented of the Soviet military leaders. On my soul the meeting with Nikolai Fedorovich had left an indelible mark. I, like all of his subordinates, had learned from him a selfless love for my people, for my Leninist party. ¶ On 4 March the troops/forces of the 1st Ukrainian front, which were now commanded by Marshal G. K. Zhukov, went on the offensive. The Proskurov-Chernovitsy operation/process had begun. The enemy attached much importance to the holding of Ternopol' and Proskurov (now Khmel'nitskiy), tried to drive back the Soviet troops/forces, which had cut the important L'vov - Odessa main trunk line. Breaking the resistance of the Hitlerites, the armies of our front on 17 April moved out to the Torchin-Berestechko-Zalozhtsy-Chertkov-Kolomyya-Kuty line and temporarily went on the defense. After exhausting the enemy in the defensive actions, our troops/forces on 21 March renewed the offensive. During the time of the offensive the front moved from 80 to 350 kilometers. Considerable territory of the Right-Bank Ukraine and a large net of railroads were liberated. The divisions of the front moved out into the foothills of the Carpathians and approached L'vov.

At the end of April we entered within the limits of the L'vov railroad. Our administration was located at Podvolochisk. Soon I accidently learned: at Izyaslavl', that in the environs of Shepetovka, there was located with a group of his engineers the commander of the L'vov road Peter Kas'yanovich Shakhray. The L'vov main trunk line bordered the Vinnitsa trunk line along the Lanovtsy, Podvolochisk, Gusyatin stations. Consequently, Izyaslav did not enter into the limits of the L'vov road. After learning about the location Shakhay, I was astonished. Indeed all other commanders/chiefs of railroads, as a rule, were located in our administration and worked with us in close contact. Remembering about this, I ordered the chief of staff to prepare quarters for the L'vovians. But, Shakhray did not appear.

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After several days the Peoples Commissar phoned me and asked me to call the commander/chief of the L'vov road to the phone. I answered:

- I could not. Shakhray was located in Izyaslavl'.

- Disgrace! - flared up the Peoples Commissar and he hung up the phone.

On the next day Shakhray with his operations group appeared in Podvolochisk. I introduced him to the situation in the liberated sections of the road, and he quickly joined in the work.

For the restoration/reduction of the recently liberated junctions Rovno and Zdolbunov we assigned Gorem (advanced guard repair detachment) No. 7. The Germans excellently understood the strategic value of these stations; therefore in every way possible they tried to spoil their restoration/reduction. Especially bitter bombing of the Rovno and Zdolbunov junctions was carried out on the night of 30 April to 1 May. The Goremovtsy (advanced guard repair detachment members) were preparing for the celebration of the great holiday; mood in all was elevated. About 22 hours, as soon as it had gotten dark, above Zdolbunov and Rovno there appeared German aircraft. The distance between the junctions is not too great - 12 kilometers. The aircraft dropped flares on parachutes. It became light as in the daytime. On the routes/paths there stood fuel cars and cars with ammunition. The Goremovtsy did not have time to collect themselves, as the dive bombers attacked. For two hours the bombing continued. The aircraft approached in waves, one after another. On the Zdolbunov junction alone the Fascists dropped about 500 bombs. The air defense of the junctions could not prevent enemy from

conducting precision bombing. By midnight the station routes/paths and communications/connection were disabled. On the routes/paths cars and tanks blazed. Fortunately, artificial structures/installations barely suffered.

The Goremovtsy joked somberly:

- Thus and they congratulated us, those snakes, on the first-of-May holiday !

The commander/chief of the Gorem I. V. Timofeyev together with his deputies V. I. Ogarkov, T. M. Prikhod'ko and chief engineer by K. A. Gubarem they rapidly developed the plan of overcoming the aftereffects of raid. The columns of road foremen I. Ya. Revchuk, G. V. Grishin, Ya. I. Norikhin and t. D. Muzyka were sent in tc extinguish the tanks, the cars and to clean up the station routes/paths. Foreman P. V. Baranov's column began to restore the switching necks of the Zdolbunov junction, while foreman T. T. Lysyy's column - Rovno junction. Foremen G. Ye. Kozlov and D. A. Gorlov led their people out to repair the station routes/paths. Working foreman A. G. Timoshenkos restored communications/connection.

The people worked the entire night. At 2 A.M. the dispatcher communications was operating, and by 4 A. M. - the station communications. By morning the main track of the station was cleared of broken rolling stock, craters were filled, the movement of trains was renewed. German scout soon arrived flying and, obviously, recorded the organized restoration/reduction of the junctions. The Goremovtsy awaited a new raid, but during that day it did not materialize.

After being convinced of the futility of massed attacks, the Hitlerites changed their tactics. They began to bomb the junctions in two approaches. The first group of aircraft came exactly at 2200 hours and concluded the bombing at 2300; the second began to attack after 2-3 hours. The reasoning of the enemy was simple - to drop bombs on the working people, not allowing the restoration/reduction of that which had been destroyed. The working Gorems rapidly adapted to the new tactics of the enemy. They did not leave the work sites, but hid in the craters from the bombs, which appeared after the first approach of the vultures. As soon as the Fascists flew away, the Goremovtsy continued their work. Thus, these tactics of the enemy did not bring success. Then Germans began to release bombs of delayed action. On one of the nights on a neck of the Rovno junction four bombs of heavy caliber were dropped: three of them exploded, but the fourth didn't. The railroad workers did not notice it. The Goremovtsy

filled up the craters and laid new switching crossings points and crossings. A total of 60 people were working on the filling. A powerful explosion suddenly went off. - the fourth bomb had actuated. The engineer of the Gorem Ye. A. Gladynyuk died and two of the local citizens who were helping us, and 35 workers were wounded. Fortunately, the soil at this site proved to be soft, dusty sand - quicksand, and bomb penetrated deeply into the earth/ground. The burst occurred underground. The people suffered not from the bomb splinters, but from the pieces of rails and the ties which flew up into the air. Shortly thereafter from splinters of a delayed action bomb at Rovno our remarkable foremen P. V. Baranov and A. G. Timoshenko were killed.

On 10 June, 1944, was begun the summer offensive of the Red Army. The troops/forces of Leningrad and Karelian fronts with the support of the ships of Baltic fleet carried out the Vyborg-Petrozavodsk operation.

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During June-July the troops/forces of the 1st of Baltic and three Belorussian fronts conducted a remarkable strategical operation, as a result of which the enemy was routed in Belorussia and Lithuania.

The troops/forces of the 1st Ukrainian front toward the end of June completed the preparation for the offensive operation, which was subsequently called Lvov-Sandomir operation. In the course of the preparation for this operation/process the railroad troops/forces and the special formations of our administration constructed many spurs and sidings depots/dumps, and routes/paths for the parking of armored trains PVO [- Air Defense], increased the number of lines for the passage of heavy trains, laid many alternate paths, constructed bypasses around several railroad junctions. All these measures considerably increased the capacity of railroad net/system, which contributed to the success of our offensive. Remembering the instructions of quiet N. F. Vatutin, we during the preparation of the project of long-range plan gave primary attention to ensuring the approaches to the L'vov junction from the direction of Ternopol', Zdolbunov and Lutsk. After the liberation of L'vov it was planned immediately to begin the restoration/reduction of the L'vov-Peremyshl' line. The plan was approved at all echelons of command and approved by the chief of staff of the front General V. D. Sokolovsky.

On 13 July the troops/forces of our front delivered a smashing attack on the "Northern Ukraine" group of German armies. On 27 July L'vov was liberated. I immediately went into the city. The L'vov railroad junction lay in ruins. The unique building of the station

was a heap of glass and brick. There survived not one viaduct, not one neck of the stations. I charged the development of the design of the restoration/reduction of the junction to the group of engineers headed by I. G. Ogoyev. The engineering office of Gorem No. 7 helped the group, which experienced engineer B. M. Mishin supervised.

Our units restored the route/path directly behind the attacking troops/forces. After the liberation of L'vov, losing not one hour, the military railroad workers set to work on the L'vov junction and on the section from L'vov to Peremyshl'. The latter was cleared of the enemy at the same time as L'vov, on 27 July.

On the second or third day after the liberation of the city I was awakened at night by the telephone.

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The commander/chief of the rear of the front lieutenant general N. P. Anisimov was calling:

- Pavel Alekseyevich, come immediately to me at the administration. Marshal Konev is interested, why we are not restoring the line from Rava-Russkaya in the direction of Kovel' Vladimir-Volynskiy station.

- This line was not in the plan.

- The marshal said that we had incorrectly developed the plan. This line has very little destruction. It must be restored/reduced first of all. Come, we will compose a new plan!

I called S. V. Brykin and ordered him together with the staff officers to prepare the technical documentation available to us with respect to this line, and also to communicate with the administration of the VOSO (military roads and communications) of the front and to find out, what information they have available. If at the VOSO there is supplementary information, to immediately report to me the logistical headquarters. After calling for a vehicle, I left for the logistical headquarters of front.

After bumping along the destroyed streets of the city, the vehicle moved out into the open and in the hour stopped near a small house shaded by greenery. Nikolai Petrovich Anisimov examined some papers. After seeing me, he closed the document case:

- Pavel Alekseyevich ! Compose a new plan !

I began to object:.

- Excess work. This line goes parallel to the San River. We ensure the front by the shortest path on the main course. All our brigades are concentrated here.

- Do what marshal Konev ordered!Someone of the commanders reported to marshal, that the northern course of this line was barely destroyed. It is possible to restore/reduce it in three or four days.

- We can't restore this course very easily. It is necessary to transport the battalions too far. We will lose much time on this.

Anisimov did not begin to listen to my objections and he moved out. I called to Brykin and asked, what he had learned that was new about this section.

- Thus far it has been established/installed, that three small bridges have been destroyed, and also, about nine kilometers of route/path. What other destruction there is - is unknown.

- Take the company from the L'vov junction and send it for the restoration/reduction of the bridges. The correction of the route/path must be organized by the forces of the local population.

Let the officers of our administration take control of this!

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After a certain time into the office entered the commander/chief of the administration of the VOSO of the front General P. I. Rumyantsev. I began to show him the senselessness of the restoration/reduction of the northern course. As a response Rumyantsev shrugged his shoulders:

- It is more evident to Marshal Konev!

To object to this argument is useless. The order of commander is not discussed. He sat down at the table, and began to compose a new plan. It is necessary to remove/take the battalions from the main routes. Assemblies, march/passage for tens of kilometers the transportation of equipment, materials, the preparation of the new front of works. I visualized all this and was gripped for the head. Yes within this time we could restore/reduce the main routes, which are so necessary to the front.

General N. T. Kal'chenko at night into the staff/headquarters arrived. I reported to him about the obtained mission. He attentively listened me and said:.

- It is necessary to do what the marshal ordered!

By morning the draft of the plan was ready. Kal'chenko, Anisimov, Rumyantsev and I went to report to I. S. Konev. The door into the marshal's marshal was opened slightly.

The commander heard the conversation and said loudly:

- Come in, why are you standing there!

We entered. Behind one of the tables in the office the representative of the General Headquarters of the Supreme Command marshal G. K. Zhukov was working. I firmly resolved to itself, that to argue with Konev, and in the presence of Zhukov, I would not. Also I will not report. Let Anisimov or Rumyantsev report. But it did not happen in the manner that I wanted. Marshal Konev looked at me and asked:.

- Who of you will report?

All were silent. Konev continued to look at me, and I resolved:

- Your mission for the restoration/reduction of section from L'vov to the north in the direction of Kovel' was not specified by the plan. The draft of the plan was approved the chief of staff of the front and NKPS (Soviet People's Commissariat of Railroads - 1922-1946). According to this plan we deployed the brigades. Now the main efforts we direct to the restoration/reduction of the route/path in the direction of Peremyshl' and then to Pshevursk and Sandomir. To divert people from the main roads to the secondary sections there is no possibility now....

Marshal was angered:.

- You always listen to the NKPS. The way your supervisors tell you, that is how you do it.

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G. K. Zhukov interrupted the conversation:

- What kind of instructions do you have from the NKPS?

- To restore/reduce the line to Peremyshl'. To construct the bridge across the San. We are now carrying out works in the L'vov-Peremyshl'-Pshevursk-Razvaduv sections. - We are preparing for

the construction of the bridge over the Vistula near Sandomir. Then we will go in the direction of Kel'ts and Chenstokhov.

After listening to me, Zhukov turned to Konev:

- What do you, Ivan Stepanovich, want them to do? Indeed this is main your direction/axis. Why divert their forces in the northern section and restore it only for one army....

At this time into the office the Zhukov's adjutant entered and he passed some telegraph message to him. Zhukov read it and went out of the office. Marshal Konev asked:.

- What will we do?

- Here are two drafts of the plan for you. Confirm either.

- I will not change the plan approved by Sokolovsky. But if you do not complete the task in time, then you alone are to blame!

- Let us try to finish the section from L'vov to Peremyshl' before the appointed time.

- How many many days will it take to restore/reduce the bridge

over the the San? By the twelfth of August will it be ready?

- Let us do it by the tenth ! - I promised rashly.

- Good, I will write in my memory.

- To Rava-Russkaya on General Anisimov's instruction I directed the bridge company. With the aid of the local population the road will be corrected.

- Why did you keep silent, didn't you report immediately? Do you think, the commander has nerves of steel....

Next day after this conversation I left for the Ternopol'-Potutory section, which the 7th brigade restored. The length of the sector was 65 kilometers. It was destroyed completely. Moreover, near Potutory the Germans blew up the familiar to the reader large viaduct over the blind valley, the same one, which we could not blow up during July 1941. The length of this viaduct is 200 meters, and the height is 40. In order to restore/reduce this structure/installation, many working hands are necessary. However, the local population, intimidated by the gangsters, are afraid to come to our aid. The political worker of the brigade were directed to the surrounding villages, where great explanatory work with the local

residents was conducted.

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On the second day at the first light to the viaduct began to come people with baskets and with shovels. The flow of those who desired to aid us kept increasing. Precisely on time the viaduct passed the first trains....

On the hot day of 9 August we together with Brykin and Zingorenko inspected/checked the operation at the L'vov junction. The townspeople worked together with the soldiers on the stations.

Then they were directed to Peremyshl'. To restore/reduce the bridge over the San I promised marshal Koneva by 10 August. The 14th bridge battalion, two companies of the 33rd battalion and a motor-transport batallion worked in Peremyshl'.

In these places during June 1941 we encountered the war. 100 Kilometers of the route/path unnoticeably flew into our recollections. We arrived at the bridge. On the bank of the river the work was in full swing. Around the mountain were chips, polished logs, finished frames for the supports. Pile drivers were banging away. We were met by engineer major M. P. Korneyev, who reported,

that the construction will be completed 2 days earlier than the established/installed period.

- That means, tomorrow at the end of the day? - Brykin refined it more accurately. .

- Precisely!

- Have you considered everything? - I asked Mikhail Porfir'yevich. - Haven't we lost tomorrow? You know it's Sunday. Will the local residents come out for work?

Korneyev smiled and told that the political workers, the communists and the Komsomol members, headed by the zampolit (regimental political officer) of the 33rd battalion S. V. Leonov, conducted the appropriate work among the population.

And actually, on Sunday for the construction work almost all the inhabitants of Peremyshl' turned out. They worked with great effort. By the end of the day the construction of bridge was completed. Immediately on the telephone I reported this to marshal Konev...

In L'vov an unpleasant communication/report from Kiev awaited me. Fascist aircraft damaged the high-water Darnitsk bridge. A

thousand-kilogram bomb exploded near the support, which listed greatly. It was necessary to stop the movement of trains over the bridge. At this time in Kiev I. Yu. Barenboym's motorized detachment No. 2 restored the Podolsk bridge. The detachment had recently put. into operation the bridge over the Dniester near Zaleshchiki, whence it arrived to Kiev.

Barenboym immediately took the necessary measures for the restoration/reduction of the Darnitsk bridge and within several hours the movement of trains was were renewed.

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But Isaac Yulisovichwas not confident in the reliability of the restorative operations conducted and requested me to send G. I. Zingorenko to aid him. Zingorenko immediately flew into Kiev, where together with Barenboym he inspected the damage. They decided next to the injured/damaged support to drive in metallic piles, and then with their aid to reinforce the inclining support.

But where to take the metal piles? Zingorenko recalled that before the war, when he built the Navodikovo bridge, the approaches to it were built up with the aid of dredgers. Grigoriy Isaakovich proposed to Barenboym to use pipes/tubes of dredgers as piles. True,

soon urban organizations detected the loss of pipes/tubes. They began to search for the guilty ones. The watchman of the depot/dump related described that the soldiers of General Kabonov carried the pipes away to the Darnitsk bridge. For the construction the secretary of the Kiev city committee of the party F. V. Makiyenko and the chairman of city executive committee A. I. Davydov arrived. After listening to the explanations of Baremboym, they agreed, that in this situation there was no other answer. The restored/reduced bridge survived several years. After war motorized- construction-unit-1, which I. Yu. Barenboym headed, raised a fundamental, beautiful structure/installation on the site of this bridge.

On 29 July the troops/forces of the 1st Ukrainian front forced their way over the Vistula and took bridgehead in the Baranuv area. Enemy furiously counterattacked, attempting to destroy the bridgehead. However, our large units/formations repelled all counteroffensives and on 18 August they freed Polish city Sandomir, after enlarging bridgehead to 75 km along the front and to 55 km into the depth. The Lvov-Sandomir operation/process was one of the largest operations/processes of our front. It continued more than one-and-a-half months. As a result of it the liberation of the Ukraine was almost completely accomplished. The expulsion/exile of Hitlerites from the southeastern areas of Poland was begun. With the capture of the Sandomir bridgehead the conditions for the beginning

of offensive into the deep areas of Poland were created.

But before telling about the restoration/reduction of railroads in the territory of fraternal Poland, is desirable to be look back and to cite some results of the colossal work, done by the railroad troops/forces and special-formations UVVR-3 in the Right-Bank Ukraine.

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From November 1943 through August 1944 railroad brigades and special-formations of front with the aid of the local railroad workers and the population restored/reduced about 3800 kilometers of route/path. Were put into operation the large bridges over the rivers Uzh, Sluch, Teterev, the Southern and Western Bug, Dniester, Prut, San, tens of intermediate and small bridges, high viaducts. We restored and carried out the road development of such large junctions as Fastov, Shepetovka, Grechany, Zhmerinka, Kazatin, Ternopol', Zdolbunov, L'vov, Rovno. At the the L'vov junction alone they laid 137 station roads and ensured the two-way traffic between the L'vov-Glavnyy-Podzamche stations. To enumerate everything that we did at this time would be difficult. But also from the numerals named by me it is evident, how much work invested the soldiers, officers of the railroad troops/forces and special-formation of the 1st Ukrainian

front into the common cause of the great victory over the enemy in the Right-Bank Ukraine !

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THE ROADS LED TO BERLIN.

Frequently during the years of war railroads were figuratively named the arteries of front. Comparison is accurate. The most important basic component of these arteries were bridges, perhaps, most complicated of all engineering constructions. It is easier and faster to restore the multi-kilometer sector of tracks than a large bridge. This is why, as I already said, during the liberation by our troops/forces of new areas we, first of all, tried to reconnoiter the bridges destroyed by enemy and immediately to begin their restoration. Was guided by this rule also the commander of the 7th railroad brigade Colonel N. I. Novosel'skiy, when he sent out a reconnaissance party to the bridge across Vistula at Sandomierz.

At this time combat on the left bank of river for the expansion of bridgehead still thundered, another brigade had just been deployed on the line from Peremyshl' to Przeworsk and Razvadow, and Major A. Ya. Dain already conducted the 33rd battalion to Vistula. He led it

under the fire of hostile batteries, directly behind the attacking divisions. The detachment of technical reconnaissance, which the deputy commander on technical section engineer captain V. S. Kardash commanded performed in front. In the northern angle of bridgehead, almost at front line itself, passed the railroad. It connected Sandomierz with Skarzysko-Kamienna. Basic part of the line and this station was located in the hands of enemy. For the bridgehead the short, torn by enemy section of the main line had no value. On it nothing could be transported to our large formations, which fight on the left bank.

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In spite of this, bridge was ordered to be restored. In the near future new offensive operations of the Soviet troops/forces were necessary.

In the territory of Poland we encountered new difficulties: the absence of technical documentation on the constructions of tracks, station and construction. The geographical descriptions of terrain were the sole source, from which it was possible to learn anything at all. They sent them to us from the staff/headquarters of front. But in these descriptions frequently nothing dealt with the railroads, and even if there was some information, then quite often it was very

inaccurate. Thus, for instance, about the Vistula bridge we had no information. Bridge, as we supposed, was destroyed to the base. Scouts found boat and produced the necessary measurements of river and bridge. The length of bridge - is 561 meters. It became immediately clear that to restore this bulky construction on the old axis is impossible, it is necessary to build it alongside, in parallel to the axis of the destroyed bridge.

Soon in the area of future construction appeared miners with mine detectors and probes, and after several hours drove up G. I. Zingorenko with the group of designers. Together with V. S. Kardash they began to prepare for the development of the design of the construction of bridge. Arrived also the subunit of the 33rd battalion with the pile drivers, the finished piles, the tools, the materials. The deserted bank revived. Without waiting until project, A. Ya. Dain ordered to place on the water the pile drivers.

I assigned Colonel Novosel'skiy as construction commander of bridge, as deputies - chief engineer of the brigade Colonel V. D. Gal'kevich and Major Dain, and as chief engineer engineer captain Kardash. To help the 33rd battalion toward evening on 18 August came the 60th and partially, the 14th separate bridge battalions. They were commanded by Lieutenant Colonels S. P. Ryzhkin and N. S. Vikhorev.

While pile-driver operators installed diesel- hammers, and electricians of sergeant N. Il'icheva installed their assemblies and stretched wires of illumination across Vistula, designers calculated, discussed and traced the diagram of construction. The diagram itself did not cause serious disagreements. All 25 spans of bridge were designed to be covered with captured beams "Peine." True, beams had different numbers and different length.

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But designers grouped them and from the groups calculated spans, The design for the construction of supports on small spans, where it was proposed to lay beams, caused doubt. Some insisted for the uniformity of supports to make their four-frame ones, 4 struts in each; others - two-frame, 6 struts in each. The second version required fewer piles, but it was very complex in work. In this case it is necessary to grip the reclining and upright struts of frames by bolts. But there is nothing to bore the holes for the bolts, there are no large bits. We decided to make four-stand supports.

The NKPS ordered to restore bridge in 15 days. I gave task to design the graph/curve of construction for 12 days (beginning from 20

August).

More than a quarter of century have passed since those August days of 1944. Much is forgotten. But V. S. Kardash helped to resurrect those distant strained days in my memory. In the simple common notebook the chief engineer of construction at the end of each day made short records. These recordings, fortunately were maintained. I will give some quotations from them:

20 August. First day of construction. Common graph/curve is affirmed. They are distributed among the sectors of support. The bridge company of the 62nd battalion arrived. I assigned sector to it for the tamping of supports. The 60th battalion delivered/brought its two pile drivers. By end of day they drove in 32 piles. The 33rd battalion for a long time could not fix its pile drivers. Reason: poor maintenance.

We began on the bank to dig foundation areas under the supports. From the morning the geodesists held up earthwork. On the construction site there is little lumber. Motor vehicles are not sufficient for its transporting. More exactly, vehicles exist, but there are no trailers. There are only two of them. It is possible to deliver lumber by cartage, but also it is not sufficient. Only 30 wagons, and are necessary - 200. Pouring of approaches has not begun

- there are no people. It is bad !

21 August. The pile drivers "get jammed". But nevertheless the tamping of piles proceeds. The absence of lumber as before hinders affair.

22 August. Are already driven in 190 piles, in all it is necessary - 376. Of 24 pile supports are driven in completely by 11, remained 13. Pile work on the graph/curve must be completed on 24 August, i.e., day after tomorrow. but we cannot make this. At best - we will drive all of them in completely on 25 August.

With the supports and the frames we are in advance of graph/curve - it is good ! In the organization of the tamping of piles we committed an error.

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General Kabanov noted it. "Primary attention, he said, must be given to the deep-water section of the river bed. But you drive in where it is easy - near the banks".

Badly works Lieutenant Lyakhovets's pile driver - strong flash. I ordered him to compose impoverished mixture of fuel. It worked !

23 August. Pouring of approaches lags behind the graph/curve. Of 16 thousand cubic meters of ground was poured in three days only 1150. People are not sufficient. But today already worked 700 Polish citizens. For their activation I transferred Senior Lieutenant Men'shov's company to the approaches. They carried out the banner of the 33rd battalion. With the Polish citizens a meeting was conducted, appeared zampolit Leonov. Work went more rapidly.

24 August. General Kabanov today on "planerka" [short planning session] was present. He said that we incorrectly conduct "planerkas." It is necessary to require from the commanders/chiefs of the sectors not only a report on what was done in a 24-hour period, but also about how the operating schedule is being fulfilled.

At the construction is working the visiting editorial staff of our front newspaper "for the rout of enemy", which organized the special issues of newspaper during our construction. In today's issue they raked me over the coals. They said I organized the tamping of piles badly. "Until now, the piles have been driven in on the lightest sectors. Afloat has not yet worked one pile driver. For the river supports is oppressed not driven one pile. Not better is my work on, the earthworks. "On the left approach they have not yet

started ... ". Oh, if editor knew what it means to organize the construction of a large bridge on an empty place, on top of that under artillery and aviation of enemy!.

25 August. Already 2 hours 45 minutes of night. At 6 A.M. it is necessary to arise. So almost every day. For sleep there is no time.

Evening. Today German artillery again fired on bridge. Entire right bank is pitted by craters. Accuracy of fire with each day increases. There are wounded and killed ....

26 August. Our officers guessed the secret of an increase in the effectiveness of the fire: enemies used a reference point for the adjustment fire of their guns. On the left bank of Vistula high brick plant chimney not far from the bridge stood. Miners exploded it. The accuracy of the fire of German artillerymen immediately was destroyed".

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When bridge was almost ready and there remained to cover only three spans on the left bank of river, several hostile shells nevertheless struck their target and destroyed two supports. From this point on, the troubles began for me. For some reason about the

damage of bridge to marshal Konev the commander of the 3rd guards army General Gordov reported. Marshal called me in together with General Anisimov. Hardly did we have time to enter the office, when commander asked:

- Who ordered you to restore the bridge across Vistula?

- Comrade marshal! The bridge is large, you will not rapidly restore it. When front passes into the offensive, then railroad will be required. Thus we prepare it in advance.

- Who told you that the front will pass to the offensive?

- Not only we, but every soldier and officer knows this. We have not occupied a bridgehead in order to sit on it.

On Ivan Stepanovich's face there was a faint smile:

- You were right, Sandomierz bridgehead, figuratively speaking, the revolver, aimed directly at the center of the lair of enemy !

There is no doubt the fascists knew this perfectly well. They vigilantly followed each movement of our troops/forces. So that the enemy would not detect preparation for the offensive, Ivan

Stepanovich ordered troop regrouping to take place only at night, that tanks and motor vehicles be moved blindly, with the extinguished headlights. For the least violation of order the commander strictly punished culprits. On the motor roads were arranged the patrols, which followed the observance of the rules of blackout. I understood the concern of commander. And when in the conversation he unexpectedly reproached me because of the fact that I in the NKPS trumpeted about the forthcoming offensive, to this I said:

- In the the NKPS Peoples Commissar is member of GKO. The operational plans of each front are known to it.

- NKPS, NKPS ! - mimicked me marshal.

For some reason Ivan Stepanovich did not like the reference about this people's commissariat.

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I decided not to mention about the NKPS and took the blow myself, did not mention even about the fact that the plan of the restoration of Sandomierz bridge was affirmed by General Sokolovsky.

On the Sandomierz bridgehead there was a system of light

railways. Even prior to this conversation commander ordered me to connect it with the main front main line Razvadow-Debica. We designed this connecting branch from Tarnobrzeg station. Across Vistula route/path they outlined to lay on the highway bridge. But for this bridge had to be strengthened. We carried out construction work together with the engineers of front, which General I. P. Galitskiy commanded. After several days the branch was constructed. On it a large quantity of supplies was delivered to the bridgehead.

During the day of conversation connecting branch was not yet ready, and I reported to commander, how things were going. Marshal listened to me and again he began to speak about the Sandomierz bridge and ordered to temporarily end work on it.

On the way to the directorate I dropped in on the staff/headquarters of the 7th brigade and reported to Novosel'skiy and Dain about I. S. Konev's order. Dain from the unexpected contingency clasped his hands:

- bridge indeed is almost ready !

Novosel'skiy asked:

- What will we say to our soldiers and officers?

- Tell them that the bracket crane gives large distortion. Serious repair is necessary.

Actually/really, crane beam was skewed to 60 centimeters and it was impossible to install packets with it. Therefore reference to the malfunction of crane appeared convincing. In my soul I did not share the opinion of commander. I knew that the bridge soon will be required. If now we do not restore it to completion, then during the offensive many forces will be diverted to it. Therefore it is more advantageous now to finish its construction. I prompted Novosel'skiy and Dain, how to do this:

- overhaul crane and fortify supports in the night time.

The commanders of construction used my advice/council. Battalions secured supports at night and covered three remaining of spans. Bridge was ready for the passage of trains and awaited the liberation of line Sandomierz-Skarzysko-Kamienna.

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Operational lull on Vistula continued almost four months. We

prepared well front railroads for the forthcoming offensive. This it noted in the recollections "forty fifth" by I. S. Konev: " at the beginning of operation/process (has in mind Vistula-Oder. - author's note) railroads in the rear of front were restored and they operated satisfactorily, and are also carried out extensive work on the repair of equipment and motor transport. To the troops/forces the necessary quantity of ammunition, fuels and lubricants and rations is delivered/brought. The reserves of shells and mortars of all bores composed four units of fire. There was automobile gas for five refuelings, aviation gasoline for nine refuellings, diesel fuel for four and one-half refuellings. All these supplies, taking into account their replenishment, was sufficient for the realization of large-scale operation/process at large depth" [1].

FOOTNOTE [1]. I. S. Konev. Forty fifth. M., Voenizdat, 1970, page 13. ENDFOOTNOTE.

Operational lulls for us, railroad workers, is not rest, but the strenuous work. The enormous volume of works, carried out by the railroad troops/forces of front during this period, can be judged from the following facts. As I already said, the bridge across the San in Przemysl with a length of 182 m was raised in 5 days. In seven days we restored the second bridge across the Sun in Surokhov area. Its length - 202 m. Now two bridges across this river gave green

light to two lines. The main one - from L'vov to Przemysl, secondary - from Rava-Russkaya to Surokhov.

The reader knows, with what high tempos Vistula bridge at Sandomierz was raised. Battalions constructed in 24 hours 29-36 meters. And this in a combat situation, under the conditions of a sharp/acute deficiency in the materials. Sector Sapezhanka-Krystynopol'-Rava-Russkaya was restored by the 19th brigade on the average of 10 kilometers in a 24 hour period, and on the section/segment L'vov-Przemysl - 12.5 kilometers.

The 45th railroad brigade of Colonel A. I. Natalevich restored the sectors of L'vov-Sambor, L'vov-Khodorov and Khyrov-Zaluzh It arrived to us in the beginning of August from the 1st Belorussian front. Soldiers and officers of brigade had enormous experience of the restoration of route/path and bridges behind them. They revived Kursk junction, line Khutor Mikhaylovskiy-Zernovo and many other main lines.

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Very extensive work was done by the railroad workers of our front on restoration of L'vov junction. We revived this junction almost fundamentally. It had enormous strategic and national-economic

value. The stations of junction provided the transportation of supplies for several fronts. Instruction for restoration and technical development of L'vov unit I obtained directly from the Peoples Commissar of lines of communication.

The initial restoration of L'vov junction was produced by 9, 44 and 33-rd battalions of the 19th brigade. At the stations and in the sorting motor pools they adjusted and altered from West European to the Soviet track 4-5 tracks. As a result of this the junction ensured the departure to the troop trains in all directions. After this the engineers I. G. Ogoyev and B. M. Mishin obtained from me the task: to develop the design of the complex restoration of all constructions of junction. In the project were included - the depot, water-supply points, equipment buildings, viaducts, station, tracks and neck of the L'vov, Stryy fleets, and also stations L'vov-Podzamche and L'vov-Kleparov. This enumeration alone speaks about the enormous volume of works. The capacity of junction was planned to bring up to 72 pairs of trains in 24 hours. Engineers developed this project, determined job priority and calculated the requirement in people. For the execution of this task I directed the units of the 7th brigade, gorem No 7 and vodrem No 13. vodrem No 13 was headed by A. L. Iznairov, excellent organizer, a specialist knowing well his business. In all years of war I do not remember the case that the water supply was not in proper time ready in the sectors restored by

us. A collective-toiler we named this vodrem. But the forces of units, assigned by me, were clearly insufficient. In order in a short time to fulfill everything, envisaged by project, it was necessary, according to the most modest calculations, about six thousand more people. To the aid local railroad workers arrived. Then I went to the secretary of the L'vov regional committee of the party I. S. Grushetskiy (now the member of the Politbureau of the communist party of the Ukraine). I described to him about our needs. Grushetskiy gave instruction to the secretaries of the district committees of the party to draw townspeople for the restoration of junction. To us in aid hundreds of people of different ages and different professions arrived. Among them there were the metal workers, erectors, welders, electricians. But it was precisely this group that there was not enough of.

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If during the first day to construction more than 500 people arrived, then in subsequent days thousands of L'vovites worked, as the saying goes, after folling up sleeves.

All townspeople and railroad workers were broken into brigades. The heads of sections and services of unit headed the brigades. For example, the commander/chief of Sokolov division led the brigade of

civil engineers. His brigade altered the station tracks of L'vov-Glavnogo, L'vov-Podzamche and L'vov- Kleparovo. The necks of L'vov-Glavnogo station were complicated interlacement of a large number of crossed points and crossings and blind sections. Sorting pool was pressed between the buildings of station and locomotive depot. With all these deficiencies situation itself required all works to be produced, without ceasing the movement of trains. It is necessary to say that the fascists in 1941 also altered route/path here. They fulfilled these works in 16 days. But during this period the movement of trains was ended. We did not have available this possibility. Front was preparing for the Vistula-Oder operation. Under these conditions the breakdown of the engineer support of the troops/forces was out of the question. It was necessary to find such technical solutions, which would give the possibility to alter tracks and to lay points and crossings, as speak railroad workers, under the wheels of cars. Heads of gorem No 7 V. I. Ogarkov and K. A. Gubar' found this solution. Restoration works were carried out without hold up of the movement of trains.

For the heroic labor/work, revealed in the days of the restoration of L'vov railroad junction, front commander marshal I. S. Konev awarded with orders and medals many military railroad workers. High government awards were given to 45 engineers, technicians and workers of gorem No 7. V. I. Ogarkov was awarded the order of the

Great Patriotic War of the 1st degree, engineers K. A. Gubar', B. M. Mishin, I. A. Drozdovich and K. P. Borodavkin - Order of the Red Star.

Unnoticeably, in the work and the concerns, the summer of 1944 passed. Autumn came. Rains, mire, lack of roads were began. In one of such cloudy days into my office entered middle-aged, short unknown General.

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He saluted and introduced himself:

- Commander/chief UVVR-8 General Shishkin!

After greeting him, I asked:

- what the deuce forced you to wade through the mud from Carpathians to L'vov?

If need arises - also to Kiev on foot I will walk. I came to you for help, neighbor !

The Major General of the technical troops/forces Aleksandr

Danilovich Shishkin was the commander/chief of the railroad troops/forces of 4th Ukrainian front (UVVR-8). I heard, what heavy position/situation with the restoration of railroads was formed at this front. The troops/forces entered into the Carpathian mountains. Around gorges, rivers, crags. Every straight line turns out to be steep rises, bridges, tunnels, viaducts. They all are destroyed. Reducing works are labor-consuming. His own forces are not sufficient. But the populated areas hereabout are small, and aid from the local population especially to await. Days are compacted.

Shishkin spread out the schematic of front roads on the table, described about the condition of each sector, about his plans:

Front commander General Petrov turned to comrade Stalin for help. He requests that they attach to us several railroad brigades from other fronts, including from your's.

- That means, you have decided to anticipate events?

- it turns out, that's right ! You, obviously, will obtain instructions today. I do not want that it would take you by surprise. understand, without your aid we for a long time will get bogged down in the Carpathians.

In short - it is necessary to help neighbor. I conferred with Brykin, Zingorenko and Yakhnovich. They decided to assign the 45th brigade at the disposal of the 4th Ukrainian front. It finished restoration in the territory of Poland the sector of road Zaluz-Jaslo. I ordered Colonel Natalevich to prepare battalions for the redeployment to the sector Lavochne-Beskit-Mukachevo and to await further instructions.

During the sáme day the Peoples Commissar called me:

- on the instruction of general headquarters immediately assign a brigade at the disposal of the fourth Ukrainian front !

On 29 October the 45th brigade arrived in the new place. Were necessary to restore complicated, mountain sector with an area of approximately 150 kilometers from Stryy to Mukachevo.

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Together with our people worked the units of the 14th and 46th brigade and the detachments of the special-formations: gorem No 23, mostopoyezd No 26, vodrem No I and a tunnel-repair train No 1 UVVR-8.

In the sector of our brigade were two destroyed viaducts and

tunnels. Viaduct at 77 kilometer mark proved to be especially complicated. Its length - 175 meters. All six metallic span structures lay under a heap of brick. It means, Germans exploded construction in two stages. At first they destroyed trusses, and then brick supports. Trusses had a design with the ride on the top. Natalevich calculated that it was necessary to remove not less than 3.5 thousand cubic meters of crushed brick and 650 tons of mangled metal. But also to this were not limited basic difficulties. Viaduct is located on a 22- thousandth incline with a curve with a radius of 275 meters. Height/altitude of the construction is 34 meters. Heavy vehicles and mechanisms cannot be brought up. It was necessary to do by hand basic works.

The engineers of brigade planned the restoration of viaduct. Metallic supports at that time we did not have; therefore were designed wooden ones. Support had to be prepared of two paired frames on six struts. Between the frames we decided to frame in wooden keys at intervals of 1.5 meters. Under each end of the span building/structure one frame with a height/altitude of 26 meters must be installed ! Bulky object ! and such bulky objects - 32. Each frame on special scaffolds was built. To make these scaffolds also is difficult matter. To only drive in 2500 piles by hand it was necessary. Finished frame it was necessary to raise to vertical position and to place on the supports by hand, with the aid of the

winches and different devices. The least slant - construction will be broken. Of course for such heavy frames is necessary the permanent "foundation" - support. Frames were installed to the pile base, into which were driven in 300 piles.

One additional task soon arose. Where and how to procure lumber. There are no pine trees hereabout. All around only spruce, fir trees, and even those at a giddy height, far from the viaduct behind the pass. Neither on motor vehicle nor on tractor nor on the horse can you get to the trees. Only person can climb the ridges, cut trees and on himself carry it down. But lumber for construction was required more than 2 thousand cubic meters' !

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Nature at each step raised to builders, it seemed, unsurmountable obstacles. From the mountain grove to the viaduct there is neither road nor path. There was laid across the pass a portage. Our people on themselves dragged each six-meter log down to the gully. They here loaded lumber to carts and delivered to the viaduct. But from the sky kept coming down a tedious, autumnal, cold rain, which converted portage and construction site into the impassable swamp. The wheels of vehicles skid, legs so stick, that you pull them from the mud without the boots. Soldiers joke: "who has

not been in Carpathians, has not seen mud" !

They worked 16-20 hours in a 24 hour period. Frozen through, wet, in dirty overcoats, they slept in tents and huts, snuggling up against each other in order to keep warm. In the nearest populated area at Lavochne station only three houses remained not burned by Germans. You cannot place 1200 people in them. Bonfires were sole heat sources. Near them they were warmed up, accepted food.

By authorization of the chief of GUVVR and the commander I left to the brigade of Natalevich. The construction of viaduct went full speed, carpenters gathered frames. Mountains echoed with the knock of pile drivers and hand "rams" and with the cries of drivers of the piles:

- heave ho!

During the dinner break, when I with the zampolit of the 45th brigade Lieutenant Colonel V. I. Lipovskiy toured the construction site, to us turned young soldier Mikhail Nefedov:

- I sniper, I can with one bullet can hit a gnat in the eye !

Lipovskiy smiled:

- You're not exaggerating ?

- word of honor !

Nefedov broke into a run to the weapon stack and brought rifle with the optical scope. Painting to the gunstock with the notches, with pride he said:

- look, how much I fascists winged.

Snipers were also in our, railroad, forces. When battalions were located near the forward edge, then "hunters" after the Hitlerites left for the front-line trench and from there were removed Germans.

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Lipovskiy took rifle, he looked into the optical sight and, after making astonished face, he said:

- you say, you can hit a gnat's eye, but in the sight you cannot see a gnat!

- Well this I exaggerated this a little ....

- And why?

- so that you would let me go to the Front.

- And is this nit the Front?

- I hate pulling logs around. On my shoulders callouses from the strap, my hands are bloody, they ache. I've no more strength, let me go !

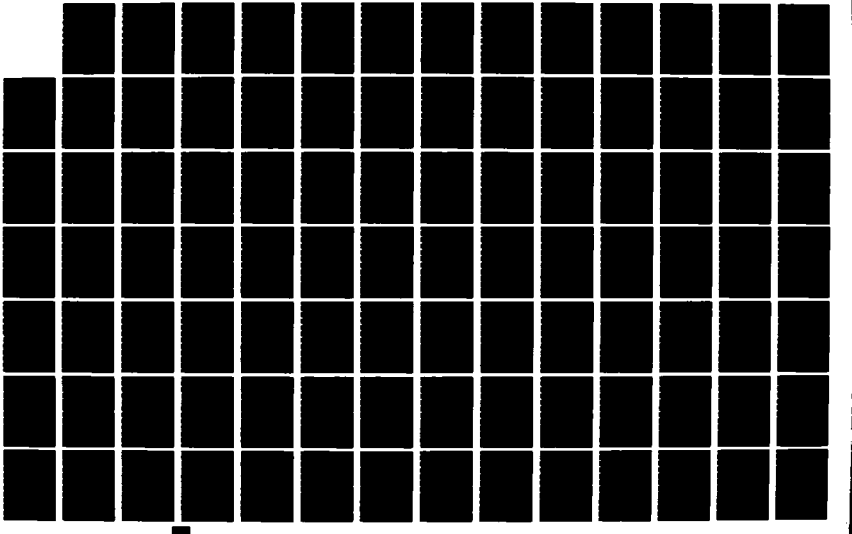
Lipovskiy glanced the thickset figure of healthy fellow with angry view and severely said:

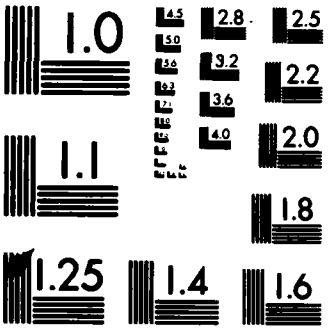
- I will not let you go ! The native land has ordered us to support combat ! And please carry out this order with honor, like Komsomol ! If all of us willingly go to the front area then who will build viaduct?

But there were not many soldiers in the railroad troops/forces. Majority of them exhibited enormous selflessness and heroism, they worked without stinting on forces.

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Natalevich approached and reported:

- I was just called by Peoples Commissar on a direct line. He ordered to restore viaduct and tunnel in ten days. I answered, that this period was not realistic. He repeated his order and promised to send his special representative to see if it's carried out. The next day in fact the authorized official of NKPS Vladimir Nikandrovich Gaev arrived by plane from Moscow.

Brigade worked according to the schedule, coordinated with the administration of the military reconstruction works and the military council of the 4th Ukrainian front. According to this timetable, there were 30 days for restoration of the viaduct and tunnel. Gaev did not take into consideration this timetable, but on his own initiative set a period of 15 days. This period remained on paper as the good wish of the representative of NKPS.

In 30 days, strictly according to the timetable, viaduct entered working order. Within the same time the 97th track battalion restored the second viaduct with the length of 134 meters, height - 26. It was built under the same complicated conditions as the first. The one thing that facilitated the work of builders, this was the fact that it was located on straight line. Led construction commander Lieutenant Colonel A. V. Koryakov.

Was simultaneously restored entire sector from Stryy to Mukachevo.

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To accept its operation arrived from Moscow special commission headed by General Golovko. They inspected the line with faultfinding, made a number of observations, but in the Act, to our great surprise, they wrote, that the quality of the restored constructions is excellent. With a light heart I with General Shishkin conducted commission back.

We tallied up some statistics. With the combined efforts/forces of the brigades of two fronts in 30 days are restored and are altered 150 kilometers of main track. Are constructed 3 large, 18 average/mean and 24 small bridges, 6 viaducts, 2 tunnels, 2 revetment. There is carried out earthwork - 46 thousand cubic meters.

As experienced, initiative specialists showed themselves during these constructions the officers of the 45th brigade Lieutenant Colonels A. V. Koryakov, V. I. Sokolov, A. F. Nunikyan, Major I. A. Chistyakov (47th battalion of mechanization), Lieutenant Colonel M. Vasil'yev (104th track battalion), the section head of the bridges of

the directorate of brigade Major P. I. Kazakevich, the section head of route/path Major G. I. Cyprian, the engineer of the squad of bridges captain K. V. Samokhvalov and many, many others. In practice we again ascertained that our personnel can successfully manage the restoration of any most complicated railroad construction.

Hardly had we put into use the sector Lavochne-Beskit-Mukachevo, when order of NKPS followed telling us to restore the line Zagorz-Humenne, passing through the Lupkow pass into Czechoslovakia,. I immediately sent there technical reconnaissance. After returning, scouts reported: the length of the sector was 150 kilometers; on the pass - tunnel - 480 meters. Both portals and middle are destroyed. We immediately calculated: to make the tunnel operational - a minimum of 3 months will be required. We did not have available this time. We consulted and decided to construct alternate route. To this area the geodesists and designers left. In days Ogoyev reported to me: the length of the detour of 3.5 kilometers. Ruling gradient - 38-thousands! The present wall, at summit of which the station stands. Projected overall volume of earthwork - 65 thousand cubic meters. Furthermore, it is necessary to construct 12 bridges, of which one is average. rest - small. The capacity of line is not more than 8 pairs of trains in a 24 hour period.

To heave to the wall it is possible train of 12 biaxial loaded cars and only one pusher.

Another course we did not have, it was necessary "to climb on the wall" ! Station at the summit of pass was called "Pobeda". About our decision to build bypass line I did not report to the people's commissariat. We pulled from Poland to the pass units of the 7th, 19th brigades and special-formation of gorem No 7. We began the construction of the detour on 13 November, and by 4 December it was already ready. On 15 December we restored and altered entire sector from Zagorz to Hemenne. Gauging from the West European track to the Soviet was done on the request of commander of 4th Ukrainian front General I. Ye. Petrov'. About all our affairs they soon learned in the NKPS. On the telephone from Moscow General Golovko called me:

- when are you Pavel Alekseyevich, going to stop taking the law into your own hands? Why Czechoslovak sector to Humenne was not altered to the Soviet track? In our country even without it cars are not sufficient.

- there is no West European rolling stock. Soon we will obtain it from the liberated roads of Czechoslovakia, then we conversely

alter track. But in the meantime let us work on the Soviet rolling stock.

- good, so I will report to Peoples Commissar ! But consider, it is not satisfied with your detour of Lupkow tunnel. It considers that you evaded difficulties. They have moved the restoration of tunnel to the shoulders of people's commissariat ....

- We were glad to do it ourselves, but our shoulders were not sufficient ....

Upon the execution of task I left to report to the General of the Army commanding the 4th Ukrainian front I. Ye. Petrov. I met with him for the first time. From the workers of the staff/headquarters of front I heard, what kind of commander he was - man is demanding, with a good military training and high general culture. This description was not wrong. Ivan Yefimovich met me simply, with friendly smile, as one meets an old friend:

- sit down, comrade Kabanov ! Say ! We gave you quite a job!

I reported about putting to use of sector and detour around the tunnel.

- fine people, thanks to you ! Recommend for decoration your outstanding people.

end section.

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- Good !

- When I saw in the sector Stryy-Mukachevo the destroyed overbridges - I was terrified! It was high - the service cap would fly right off your head. Forest on the steep mountain slopes. Involuntarily I thought: we will sit here a month to three, and then maybe four. We managed to escape misfortune with your aid. Thanks !

With more than 80 orders and medals they decorated the breast of soldiers - railroad workers of UVVR-3.

The newspaper "Pravda" on 12 February, 1945, wrote in its editorial: "Hitler burglars barbarously destroyed railroads in Carpathians, where there were enormous viaducts and bridges, deep gorges, and obstructions were formed. Germans expected to for a long time to detain here the movement of trains. However, the detachments of enemy were overturned. At the height of combat the special formations of railroad workers filled up on the beds of shell craters, were laid ties, rails, they cleared the beds of mountain

rivers, prepared frames for the supports of bridges and viaducts. Work came under the severe conditions of lack of roads and mountain-forest terrain. Along the steep mountain slopes the soldiers moved logs; in parts they fitted into the passes diesel-pile drivers, winches, mobile electric generators. Work was in full swing with day and at night. People knew neither sleep nor rest. After the short time mountain railroad was made operational. The troop trains without difficulty moved to the front line" [1].

FOOTNOTE [1]. "Pravda", on 12 February 1945. ENDFOOTNOTE.

This article of "Pravda" our political workers and agitators read in all subunits.

Certainly, the removal of part of the forces under our control could not but have negative effect on the course of preparation for the Vistula-Oder operation. This caused dissatisfaction with the heads of VOSO and rear organizations of the 1st Ukrainian front. However, subunits which remained on the site fulfilled considerable volume of work. They strebgthened the main line, loading stations and basic units. In the sectors Pshevursk-Razvaduv and Zheshuv-Dembitsa the alternate paths were restored. They introduced the Rava-Rússkaya-Surokhov sector into use. Thus, our front obtained two railroad lines, which connected it with the country: the first route

- L'vov-Peremyshl', the second - Rava-Russkaya-Surokhov. Two routes - two bridges over the San.

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Furthermore, battalions began the procurement of lumber and structures, which would be required by us during the offensive. True, procurement occurred slowly, subunits did not meet graph. But we began to obtain more materials than usual, materials and finished structures from NKPS. It seemed the command element of front has no cause for alarm for its main lines. But thus it seemed to me.

Hardly had I returned from Carpathians to my sectors when (I heard) telephone bell. Marshal I. S. Konev was calling. I arrive. The marshal looked severe, dissatisfied.

- You restore the roads of our front poorly. Where are your troops?

On the way. They return from Carpathians to their sectors.

I reported to Ivan Stepanovich, that the redislocation of brigades occurs slowly for lack of motor transport. I described what we had done on our railroads and on our neighbors, about the fact

that those units now at the front prepare for furture materials and bridge structures. In conclusion I presented the design of the long-range plan developed by us for the restoration of the railroads:

- I consider that we are doing everything necessary for the front and the forthcoming offensive.

Ivan Stepanovich gradually softened, as they say, changed anger to the favor. Our plan he attentively examined and affirmed it. At the end of the conversation he said:

- With motor transport for the redislocation of brigades I will help you.

And he aided. Brigades rapidly returned to the sectors allotted them and again began to restore the destroyed railroads and bridges. The population of the liberated areas of Poland willingly helped us. Poles turned out at the works with their tools, they arrived on the horses. Rail transportation were reinforced as the day of offensive drew near. At the beginning of the Vistula-Oder operation to the front line proceeded 2500 trains, or 133 thousand cars with military cargo. Front obtained a sufficient reserve of everything necessary for the offensive.

On 12 January, 1945, of the army of the 1st Ukrainian front took the offensive. The Soviet troops broke through the defense of enemy, routed his reserves and rapidly advanced.

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Were liberated the cities of Kel'tse, Chenstokhov. The pursuit of the escaping enemy was begun. Battle for upper-Silesian industrial area developed. On 19 January our troops freed the ancient capital of Poland - Krakow. At the end of January they on wide front moved out to Oder, they forced it and took bridgehead in the areas of Breslavl', Ratibor (Ratsibuzh), Olau (Olav) and more northwest Oppel'nya (Opele).

In the course of the Vistula-Oder operation our brigades performed according to the plan affirmed by Marshal I. S. Konev. They restored roads in the wake of the advancing forces. One of the first liberated was line from Sandomir to Skarzhisko-Kamennaya with length of 104 kilometers. It was restored by the 7th brigade, which Colonel Novosel'skiy as before commanded. Deputy of the political unit was Colonel F. M. Yershov, and chief engineer colonel V. D. Gal'kevich. The front stages of this line underwent especially extensive damage. The German defense line here spent almost four months. Hitlerites destroyed track, man-made structures, stations, points and crossings,

buildings, communications, and water-supply points in the sector. Many rails and ties had been removed for the construction of dugouts and mud huts. Thus there Marshal Ivan Stepanovich Konev could evaluate the value of our efforts for the timely restoration of the bridge over Vistula to Sandomir. How much time and effort would bridge divert. Fortunately, it was almost ready, and were required only two days, in order to make it operational; order. Thus, primary attention brigade concentrated on the restoration of Sandomir-Skarzhisko-Kamenna main line. Works were started on the entire line. During these days the front forced Oder, and brigade immediately began the restoration of main line to Katowice. People worked selflessly. I do not know, when during these days they slept, if they slept at all. On 28 January was ready head sector from Sandomir to Skarzhisko-Kamenna. On the second day trains went to Katowice. The rate of restoration was - 15 kilometers in a 24 hour period. Clearly, the officers of brigade skillfully organized works. For days did not depart from the stages Colonel Yakhnovich. He helped the political workers of brigade to skillfully organize political operational provisions.

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Excellently helped political workers our newspaper "For the rout of enemy". Its editor, Major A. A. Kukarin, organized the special issue

of newspaper and leaflets directly on the spot of work. Daily on the pages of newspaper appeared outstanding workers, they told about the achievements of brigade, criticized deficiencies.

It is desirable to say that in all years of war the newspaper was our loyal assistant, kind adviser and friend. It sensitively and in proper time responded to the events, which occur in the railroad troops/forces. It was always with us on the front line of our construction. Not one project was restored without its active participation. Newspaper was with us in the battle in the environs of Stalingrad, during the construction Staryy Oskol-Sarayevka. Newspaper of called us to the assault on the Don, Dnepr, sAN, vISTULA, Karpaty. I, the head almost 30-thousand collective of the railroad forces, could not visualize our life without the newspaper. Its services are enormous. The surnames of Kukarin and his associates were pronounced with the particular warmth and the respect. The successes of the railroad forces of front are inseparable from our combat propagandist, agitator and organizer - the newspaper "For the rout of enemy".

During these days agitational work in the units and the subunits occurred under the slogans: "To the advancing forces let us give strong reliable track" ! "Let us before the appointed time fulfill the mission of command element" ! All these slogans were received by

soldiers and officers as the order of the dear native land. Each soldier to the end dedicated himself to the assigned work, spared neither forces nor life itself.

At the front, however, surprise awaited us. In the sector of Kel'tse- Krakow we unexpectedly discovered ... tunnel. Military geographic descriptions were brought. In them no mention was made about this construction. And then Gal'kevich reports to me on the telephone from Krakow:

- Not far from the city - tunnel. Two-way, separate. Length about seven hundred fifty meters. It is destroyed completely.

- From whence did this come crashing down on our heads?

- From the Silesian mountains ! - joked Gal'kevich.

- I'm not up to tunnels now, let us restore it later. Build alternate route.

Ahead of the 7th brigade, nearer to the front line, the 45th brigade restored railroad. Its personnel worked from Czestochowa to Shteynau - the bank of Oder.

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The overall length of this main line was 330 kilometers. It went by circular route through the large railroad junctions: Kempo, Ostrow, Krotoszyn, Rawicz. The selection of so winding a march route was not accidental. We were forced to go around the large strong point of fascists Breslau, which was blocked by our forces.

To aid of the 45th brigade we designated several detachments of special-formations. Also the local population assisted greatly. Sector to the river Oder received the first trains on 14 February. Oder bridge to Shteynau was ready two days earlier than the deadline. By 27 February the brigade had restored main line from Shteynau through Val'tersdorf to Zarau. Rail track went almost right up to the front line, to the Neisse banks. The 45th brigade restored altogether within a short period approximately 500 kilometers of railroads. The tempo of restoration was comprised more than 20 kilometers in a 24 hour period.

On how selfless and the soldiers of this brigade heroically worked, it is possible to judge by the restoration of the bridge over Oder to Shteynau. To restore it the brigade commander assigned to the 28th separate bridge battalion. The batallion was commanded by one of our most experienced bridge builders, volunteer commander Lieutenant

Colonel V. A. Sokolov. Railroad to Shteynau although was ready, rolling stock was not sufficient, there were no motor vehicles. To the place of works, for almost 100 kilometers, for battle it was necessary to walk on foot. I met the column of railroad workers on the march. Knowing nothing about the method of the redislocation of unit, I was greatly astonished, after meeting on the highway its soldiers and officers. They went briskly, with joke-jests. I got out of the vehicle, I ask:

- Where are you headed?

- To Berlin, comrade General!

All laughed at the joke. Ran up commander Sokolov:

- Comrade General ! The batallion is marching to Shteynau. We go to restore Oder bridge !

- Fine people ! When do they intend to be on the spot?

- Tomorrow in the morning ! - answered Sokolov.

- And when did they leave?

- This evening.

"One hundred kilometers on foot over one-and-a-half days - can they maintain"? - I began to worry. In the morning it was barely light at the destroyed bridge. Soldiers breakfasted, they rested and here they undertook work.

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On the shore they organized construction site, dragged logs and started to process them. On the site they established poster. In enormous letters on it was written: "Here is it, Fascist Germany" ! It was necessary for us to suffer so much in order to reach the cursed Fascist lair and to erect this poster!

Together with Lieutenant Colonel Sokolov we approached the bridge. The spectacle which appeared not a pleasant one. Are exploded the river-bed span structures and the "bull", supporting all three tracks. But bridge was nine-span, with length of 387 meters. The military council of front for the restoration of this bulky object allowed 7 days and was necessary at first in 4 days to lay one track from the eastern shore to west for the passage of cars without the locomotive on it. Fuel, ammunition, rations were urgently needed by the troops. Trains with these cargoes stood at the approaches to the

Shteynau station. It was urgently necessary to get them across the river.

Bridge builders with the enthusiasm undertook task. For the collapsed span structures were rapidly established the frames, upon these - beams, and then laid rail track. They finished work in 2.5 days. Was begun the crossing of cargoes from Shteynau to the western shore. Trains went onto the bridge with cars forward. After the bridge they took on another steam locomotive, and the first returned to Shteynau for the new cars. Thus we transferred more than 5 thousand cars. Work on the restoration of bridge did not cease. Battalion prepared an alternate path for the passage of trains with the locomotives.

Germans soon discovered our Oder crossing and construction of bridge. "Heinkels" attacked. We knew that the enemy will not leave us without the attention. Therefore we were prepared for rendezvous. The command element of front isolated several antiaircraft batteries to cover construction. They opened fire on the hostile aircraft. However, during the first raid two Fascist vehicles were knocked down.

The duel of our antiaircraft gunners with the Hitler aircraft occurred in the presence of the deputy commander of the railroad

forces of the Red Army, General M. A. Maximov. He specially arrived from Moscow in order to aid in the organization of works on the restoration of railroads and bridges.

On 9 March over the Oder bridge went trains with the tanks. The line to Neisse river was opened.

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But on 31 March a bomb weighing a ton crashed into the bridge. The movement of trains was stopped. For the elimination of damage I again directed the 28th battalion. We established the period of restoration - at 5 days. Battalion worked day and night and fulfilled mission in 3.5 days.

Running ahead, I must say that, when on 16 April, 1945, was begun Berlin operation, the 45th brigade was distinguished during the restoration of line from Shteynau to Val'tersdorf-Zagan-Zarau to Forst, and then - on the construction of the large bridge across Neisse river in Forst. In the city combat still occurred, in the vicinity burned forest, and on Neisse river pile-drivers already drove in piles. This two-way, six-span construction was introduced into operation before the appointed time. For the masterful execution of the goals of command element and for the valor and heroism which

was displayed by the 45th railroad brigade by the edict of the Presidium of the Supreme Soviet of the USSR was awarded the order of Bogdan Khmel'nitskiy of the 2nd degree. Many soldiers and officers of brigade obtained also government decorations.

At this time the 19th brigade together with bridge train No 416, gorem No 7 and vodrem No 13 restored main two-way route from Peremyshl' to to Pshevursk, Dembitsa, Tarnow, Krakow, Katowice, Opole (Oppeln), and also sector from Krakow to the destroyed tunnel and from the tunnel to Katowice. The length of of main course - is more than 300 kilometers. Here were restored three large bridges and several overbridges. Bridges were thrown across the rivers Visloka, Dunayets and Vistula in Krakow. But on this main line not artificial constructions alone worried us. But no matter how strange, gauging proved to be the most labor-consuming and most complicated task. Approximately 70 percent of rails were laid out on the metallic ties. We were accustomed to dealing with the wooden ties, spikes, and the metallic tie plates. For such a bed the mechanisms and instrument are adapted. Germans welded tie plates directly onto metal ties. Rails were secured to the tie plates with special bolts, and in a number of sectors even the rails were welded onto tie plates. Was obtained rigid "dead" design. We also discovered a second method of attachment - without the tie plates. There was still a third version - tie plates were secured to the tie independently with bolts; rails were

placed on the tie plates and held with the aid of clamps.

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Each method of attachment required its method of gauging. In the first case it was necessary to loosen and to separate ties to the width of Soviet track. The moved apart rails were connected with two wooden ties. Joint metallic ties were removed and instead of them were placed wooden ones.

With the second method of attachment the gauged rails were shifted inside the track. The welded-on tie plates were cut out by chisels and sledge hammers. In the ties they bored or burned a new hole. Then rails are separated to width of 1524 millimeters and are fastened. Much time is occupied drilling and burning holes. Our rationalizers created special press-tool, which made holes in the tie.

No less original method of altering was used for the third version of attachment. Metallic ties were cut on the middle of track by autogen [welder] or by oxygen-gasoline cutting torch. They separated track to the necessary width. Rails were connected at the joints with wooden ties. The metallic ties cut out inbetween were placed on wooden half-cross ties.

Much labor was spent on these operations, but frequently the track was produced was unstable, did not provide the normal speed of the movement of trains. Rails were shaken loose, and "played". Continually was necessary to anchor them, to fortify.

In our subunits were not sufficiently qualified cutters and welders. For help we frequently turned to the local population and we always obtained it.

For example, when the 33rd bridge battalion regauged station tracks on Grosstrelitskiy junction and were restored siding tracks to the nearest plants, Polish specialists arrived to help military railroad workers. Oxygen for the welders soon ran out. Then one of the Polish comrades described that in the district of the city of Baugen is an oxygen plant. The officers of battalion immediately went to Baugen, they found this plant. It became the basic supply base for oxygen for all railroad brigades and detachments of special-formations.

And nevertheless with the entire ingenuity and the skill of our soldiers and officers track on metal ties was regauged slowly.

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Was not possible to commission more than 10 kilometers in a 24 hour period. The labor expense of each kilometer was 200-250 man-days. The process of regauging the lap switches on the metal rails was especially agonizing. All methods here were applied in most diverse combination. Metallic rails were replaced by wooden ones. When metal rails were cut, then under their middle part wooden ties were placed. These were attached to metallic rails by spikes or wood screws. But whereas the regauging of ordinary points and switches was considered grief, then the English or lap switches were considered misfortune. But there were many such switches on the Polish railroads. On the regauging of each set of lap switches we spent 280-300 man-days, more than for regauging one kilometer of track. For the restoration of bridges, as I already said, we prepared in advance. Since the beginning of the Vistula-Oder operation the bridge over the Visloka to Dembitsy was the first on the way to Krakow. This city our forces freed in the summer of 1944 during combat on the Sandomir bridgehead. Germans were consolidated on the opposite shore of Visloka, 1.5-2 kilometers from the river. City proved to be in the zone of the forces, its inhabitants left. In the daytime on 11 January the silence of urban streets was destroyed by the roar of motor vehicles. The first company of the 14th bridge battalion arrived. Company commander, captain Borzov, obtained the order of battalion commander

to prepare the destroyed bridge for the restoration. Fascists immediately detected the appearance of motor vehicles and fired from mortars. Fortunately, it was possible without losses to get out from under the fire. In the outskirts of city the railroad workers found two small densely tree-shaded wood houses. Company stationed itself in them. At night soldiers began to prepare food. It was a moonlight night, and Germans, after noting smoke, opened strong mortar fire. It was necessary to leave convenient dwellings and construct dug-outs.

The morning came. Technical reconnaissance moved out to the river, but it could not approach the bridge. Germans kept it under the machine-gun and mortar fire. Then the chief engineer of battalion M. P. Korneyev, led his detachment out for night reconnaissance. The necessary measurements were taken. Korneyev started the development of design. Their goal was to restore bridge on the bypass. Not far from the river they found lumber. They began to saw it, to process and to transport on the horses to the bank.

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On 12 January was begun the offensive of our front on the Sandomir bridgehead. On the Vistula banks was heard the load roar of artillery. But in Dembitsy area silence stood. Here our troops did not attack. However, company obtained order to begin the erection of

the bridge, which was urgently necessary for front. But just try begin work ! Hitlerites had literally strewn shells and mines. Borzov established on the railroad mound machine guns, he had agreement about the support with the artillerymen and the mortarmen. Under the cover of our fire the pile drivers were brought to the river. We had just established them - when again fell Fascist shells. But order must be fulfilled ! Taking cover by the exploded span structures, company in the floodland portion of the river dug out foundation areas under frame-log supports.

It was necessary to outline the axis of new bridge, to produce its geodetic lay-out on the terrain. Korneyev called to himself geodesist Senior Lieutenant of Tech. Services A. I. Seliverstova:

- It is necessary to get the bridge axis!

But - Mikhail Porfir'yevich, indeed they will kill us, the reptiles !

- This is an order, Seliverstov.

The young, clever Seliverstov in a flash ran off to get a theodolite and asked Korneyev:

- I'll go, only don't let after me anyone come. Maybe at one they will not fire.

Hardly had he moved out to the mound and installed instrument, when German machine gun knocked. Seliverstov grabbed Theodolite and hid behind the embankment. Borzov saw the Theodolite in his hands and he asked:

- Why did you remove the set-up instrument?

- What do you mean? This is a 10-second interrupter.

At that time this instrument was rarity. It possessed high accuracy. Seliverstov greatly valued it.

For several days the fascists fired on tracks of approach to the bridge. But even under these conditions Arkady Seliverstov carried out order - he laid outt axis.

On 17 January, 1945, rifle units drove off enemy from Dembitsy. Korneyev immediately reported this to battalion commander, Major Vikhorev. Within several hours full battalion arrived from Zheshuv into the area of construction. On the fifth day a bridge with a length of 262 meters was ready for the reception of trains on one

track. Under the alternate path the bridge was provided later, at the end of March.

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Neither were we detained on 480-meter bridge across Dunayets. The 19th brigade restored it by 7 February. The average tempo of works was here 28.3 linear meter in a 24 hour period. Frame-crib abutments were placed, and the rest - frame-pile. Captured ("Peine") rails were used, and there were not sufficient, it was necessary to economize. On the middle of span were placed the intermediate "rocking" supports of two paired frames. This bridge they first errected for one track, and then during April near the second.

The Vistula bridge in Krakow (with length of 208 linear meters) was ready on 9 February. In design sense it in no way differed from its predecessors. Here also first of all we ensured passage on one track, and somewhat later - on the second. The 33rd bridge battalion of A. Ya. Dain rehabilitated the bridge.

I memorized the construction of this bridge well. Fell into the river the favorite of the soldiers and officers of brigade, the commander of the 1st company, Senior Lieutenant Aleksandr

Mikhaylovich Men'shov. He fell from the support. Before this for several days he had not slept. But here - it was high, below on ice spilled water, wind ripples, into face drives snow with the rain. He got dizzy, and as a result - fell. We saw Men'shov already in the water on ice. All rushed to him, they pulled him out. I did ask:

- What did you injure?

- I feel nothing!

To my proposition to go to the doctor, and then to sleep off it, he answered:

- let us construct bridge, then I'll be treated, then I'll have a good sleep!

Men'shov shook himself off and was prepared again to climb on the scaffolding. Next to me stood the efficient combat, sergeant-geodesist of the same company F. M. Sokolov stood. I ordered him to take two soldiers along and to take company commander under convoy to the battalion medical aid station, and then to his quarters. Only so was it possible to force himto see doctor and to rest, this obstinate, greedy for work man, who did not feel sorry for himself Aleksandr Mikhaylovich.

Men'shov had only just been sent off, when representatives of city approached. Two days they had been preparing to meet us. Bowing and smiling, one of the Poles did ask:

- In how many months will you, General sir, build a bridge: six or three?

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It immediately became clear why they were so slow with their visit to us. They thought that the construction will continue half a year and time to aid us is completely sufficient. My response stupefied the "fathers of city".

- Bridge will be ready within eight days, tenth February.

- What will you need?

- Welders.

On the second day the welders with equipment in the morning arrived. Engineer V. N. Krivosheyev assigned to them to cut off the

ends of the trusses exploded by Germans. Welders helped us accurately within the established period, by 9 February, to put bridge in the operation. Soldiers removed scaffolding, and construction debris. Commander Dain sent all to rest. Night. I look, not far off is a bonfire. Near it squat about 10-12 men and warm themselves. I hear the familiar voice of the chief engineer of the battalion of Kardash. He asks the soldiers:

- Why you do not go to sleep?

One of the soldiers answers:

- Maybe we are still needed to do something.

- Nothing will be required, everything is done, go to rest!

The same voice again answered for all:

- If we can't help do anything, then nevertheless we will not leave. Let us see how over our bridge to the front trains will go. To us this is very interesting !

I hear, Kardash come out and ordered immediately to go to sleep. Soldiers rose and put out bonfire.

With a slow, tired gait they wandered back toward the city. I conducted them with grateful gaze. And to memory involuntarily came the words of Nikolai Tikhonov's words: "nails could be made from these people, there was not anything in the world stronger than nails ..."

The bridge across the Oder into Breslau was restored by bridge train No 416. Engineer A. I. Zhukovskiy led it, deeply knowing his affair specialist, sensitive, sociable, attentive to the people person. This collective was characterized by particular honesty in the labor, high skill and accuracy in the execution of tasks. There is a good reason why so responsible a commission I preferred to lay on this subunit. German miners exploded this large bridge to the base. Zhukovskiy with his engineers inspected damage, produced the necessary measurements of river, developed plan.

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They decided to build new bridge along the old axis with bypass of the exploded channel portion. In the plan this construction resembled the garden knife, its straight line was handle and the bent edge - the curved bypass unit. They raised and repaired five span

structures. They established bypass on the wooden supports. Spans were covered by packagesa of the "Peine" beams. The length of bypass was 259 meters, of them along straight line went 72 meters, the rest 187 - on the curve. The total length of bridge was 447 meters. The bridge train began the restoring works on 1 March, and finished on 27 March. During May the collapsed span structures were raised and they eliminated the bypass.

Simultaneously with restoration and altering of main tracks and with the construction of the bridges almost all brigades of front they overhauled and altered siding tracks to the mines and the industrial enterprises. We tried to aid fraternal Polish people as fast as possible to revive their industry. And in this noble affair the contribution of the military railroad workers of UVVR-3 was considerable. Only in the area of Katowice, Kozuba, Beuthen, Glewiec, and Oppeln the 43rd, 7th and 19th brigades laid tracks to 27 coal mines 40 to plants and to factories. The total extent of these lines was about 300 kilometers.

On the main line together with the 19th brigade the special-formations of the Gorem No 7 and Vodrem No 13 worked, which was led by familiar to us V. I. Ogarkov and A. L. Iznairov. The comparatively small collective of Vodrem No 13 could maximally restore simultaneously 2-3 stations of water supply. But Andrey

Leont'yevich contrived with the aid of the local population restore from 7 to 10 points. But in Vodrem the works were labor-consuming, tedious, and required large skill and accuracy, especially during the installation of pumps and water towers. The good memory remains of Vodrem No 13 on the main steel lines of our country and fraternal Poland !

Main pipeline from Katowice to Moravska Ostrava with the junction to Neustadt and in Katowice, and also sector of main course from Katowice through Opole (Oppeln) to Breslaus was restored by the temporarily attached to front 43rd railroad brigade (commanders Colonel A. F. Platonov, chief engineers engineer colonel D. M. Polyakov).

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They worked honestly. They fulfilled the mission in time.

What conclusion is it possible to draw from all given by me facts? The tempos of restoration works increased simultaneously with increasing rates of advance of the armies of the 1st Ukrainian front. There the main two-way axis from Przemysl to Krakow together with the bridges we restored by 9 February, and from Krakow to Katowice - on 13 February. Entire line to Opole (Oppeln) was restored on 25

February. Katowice city was liberated on 28 January, and track to it from Krakow was ready on 13 February, and from the side of Chenstckhov to Zemkowichi (which is next to the Katowice)- on 29 January. The lower-Silesian operation continued seventeen days, from 8 to 24 February, 1945. The armies of our front moved out to the Neisse river on 24 February. The 45th brigade restored sector from Chenstckhow through Kemp - Krotoszyn - Rawicz to Steinau - on 14 February. But after 13 days, i.e., on 27 February, soldiers and officers of the same brigade opened passage to trains on the line of Steinau - Ol'tendorf - Zarau - the river Neisse.

The offensive of the 1st Ukrainian front continued continuously from 12 January through 24 February. Then from 15 to 30 March were begun combat for the liberation of upper Silesia. In 60 days the forces of front traveled from 500 to 700 kilometers in combat. On the average every day they advanced 16 kilometers.

Appraising this outstanding victory, marshal I. S. Konev wrote: "all these successes became possible because the soldiers, officers, Generals in the course of such a prolonged, intense operation, which enveloped immense spaces displayed great courage, endurance, indefatigability and high military ability. But behind everything stood a deep devotion of all personnel to their socialist native land and so deep a faith in the already approaching final victory over the

fascism"[1].

FOOTNOTE [1]. I. S. Konev. Forty fifth, page 51. ENDFOOTNOTE.

I completely refer these words, also, to our railroad troops.

Within this time the railroad workers of front restored about 1200 km of main railway lines (among others 7th brigade - 450th, the 19th - 400th and 45th - 350 km)! We errected large bridges across such wide rivers as the Vistula, Wisloka, Dunajec, and Oder.

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Not only were large railroads junctions restored, but also technically reinforced: Pszewursk, Krakow, Opole (Oppeln), and Katowice. In a number of cases for us it was necessary to combine the work of the rolling stock of Soviet track with the rolling stock of West European. But this task was not simple! The daily mean tempo of the restoration of main lines in the days of Vistula-Oder, lower and upper Silesian operations was 15 kilometers and it was almost equal to the daily mean rate of advance of our forces.

I would want to further define the opinion of my former front commander, who thought that our troops lagged with the restoration of

railroads in the process of these offensive operations. On 67 page of the same book Marshal I. S. Konev writes: "the tempo of the restoration of railroads as before lagged behind the rate of advance of the troops. Distance from the foremost positions to the head depots and the front bases continued to increase. The norm of ammunition and fuel in the troops, simply speaking, became "lean". Motor transport worked with the overload, but under the conditions of slush nevertheless could not bring completely everything which was required for the advancing front.

I want to emphasize that by that time our military industry was capable of giving it gave absolutely everything, that we required. Only the unusual great distances to be traversedmade it impossible to deliver all this to the troops in the necessary quantity".

It was not the "tempo of the restoration of railroads" that lagged, but the organization of the movement of trains. After restoration of any main line a certain time is required before its assimilation. When the Red Army advanced in its territory, then our cadre railroad workers, who were the patriots of their native land and their work, provided the movement of trains. Then we went through foreign territory, where many railroad workers did not remain at their posts nor came to work when we called. Their operational units for such a long of main lines proved to be few. Indeed in each

transportation restoration battalion there was only one such company. In essence the military-operational squads of the NKPS and special operational regiments were occupied by the problems of maintenance of finished lines. But there was not enough of them.

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I recall how the heads of VOSO at that time they complained to me about the breakdowns in the work of interstation communications, which continually malfunctioned. I already said, that among the friendly inclined peaceful inhabitants in the liberated territory of Poland and Germany there were hostile agents. But communications are vulnerable. It does not take much to break wire or to cut out a piece. Moreover, we restored cables by the cold joining twist, and distance was great. Were necessary the points of reinforcing. They were absent. All this lowered the speed of trains to the front and impeded the timely delivery of all necessary for combat. It is necessary to say that at times not even our brigades rapidly managed their duty. The 7th brigade, for example, prolonged the restoration of all the strongly destroyed sector from Sandomir to Skajirsko-Kamen. Obviously, all these facts created in former commander of the 1st Ukrainian front the impression of lag in tempo of the restoration of railroads behind the rate of advance of the troops.

Certainly, in such a difficult and complicated war it is impossible to avoid deficiencies and omissions. But in essence the railroad troops successfully managed assigned missions even in the operations of our troops between Vistula and Oder.

After the completion of a lower-Silesian operation, on 24 February to the 1st Ukrainian front the calm advanced. True, from 15 to 30 March the left wing of front carried out the upper-Silesian operation, but it was of particular character. Railroad brigades and detachments of special-formations within this time strengthened the temporarily restored main lines, stations, bridges, tunnels, and constructed a number of branches to the coal mines and the large plants of Silesia.

Within the time of operational lull at the main course we restored second main track from Debice station to Opole (Oppeln), and constructed under it bridges on the Wisloka and Vistula rivers in Krakow. They switched completely from the West European to the Soviet track the main pipeline of Przemysl - Pshevursk - Jezow - Krakow - Opole (Oppeln). This considerably increased the capacity of main course.

However, on the junction of Krakow, Katowice, Opole (Oppeln) and a number of others "movers" were supplied under the difficult operating conditions. All siding tracks and lines adjoined the junctions worked on the West European track. We were forced to lay the combined tracks with lap switches at such stations. Indeed with railroads all constructions between themselves are tightly interlocked. If rolling stock is of different gauge, then by correspondingly must be equipped repair and equipment constructions. It was necessary to lay combination input to the steam-locomotive and car depot, and also to the depots of fuel and water posts.

The last military spring came early. At the end of January the high water already flowed. Struggle with the spring water and the floating of ice again began. The first distress signal I obtained on 28 February on the telephone from Colonel Novosel'skiy:

- Comrade General ! The Sandomir bridge has been swept away!

I got into the trolley and dashed to the place for accident. I arrive in Debica and learn about something new. Under the threat of drift is the bridge over the San at Przemysl. Along this main line goes the enormous flow of cargoes for the Berlin operation being

readied. It is not possible to allow the least interruption in the movement of trains. Entire night I did not for the minute close my eyes, expecting reports from Przemysl. I am connected on the telephone with commander of the Przemysl axis of track. He communicates that the bridge is being rescued by our workers and the Polish railroad workers. In the morning from Przemysl they reported:

- Soviet and Polish comrades, risking life, fulfilled their duty. Bridge is rescued !

I left for Sandomir. There I met the member of the military council of front General Kal'chenko. Together we went to the Vistula. Before our eyes the terrible picture appeared: bridges - railroad and highway - they were destroyed. The churning water tore first at highway bridge. Its fragments blocked the holes in railroad and closed the path ice flow. A giant ice jam was formed, which crumpled ice-cutters and 10 supports of channel portion of the bridge. It was bitter to look at the evil work of nature. From the dark water the collapsed trusses projected, on the bridge an enormous hole gaped.

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Almost everything, that we had created by such hard work, under the fire of enemy, was annihilated.

Nikifor Timofeyevich invited into Sandomir the commanders of transport subunits, the commanders of the depots, located in the city district, the commandant of city. By the way, Colonel I. I. Lezov, my old colleague proved to be the latter. Once in the 2nd railroad regiment he was the secretary of party organization. We immediately recognized each other and greatly were gladdened to rendezvous. Indeed how many years we had not seen each other! However, we managed only to exchange two or three words. That was not time for recollections.

General Kal'chenko opened the conference. First he permitted commanders of depots to speak. They reported, that on the western shore of Vistula there were sufficient reserves of fuel, shells and everything necessary for the front. I was somewhat relieved. It meant, that before the restoration of bridge the engineer support of the troops will not cease. Nikifor Timofeyevich gave the instruction:

- Cargoes intended for the armies of the right wing of front are to be directed through Debice to Krakow and further to the front.

The bridge across the Wisloka in Dembice, to our happiness, did not suffer, and main axis worked without interruption. And our

improvidence thus there was revealed. We had hurried with the regauging of main tracks from Razwadowa to Pshewursk. Different-sized rolling stock complicated the transportation of reserves from the front bases. On this line we had to load each car twice. Furthermore, hurridly it was necessary to build the load point in Debice.

For the restoration of Sandomir bridge were directed the 14th and 33rd bridge battalions. About what was happening it was necessary to report to the front commander, also, and to the NKPS. I reported to marshal Konev by telephone message. But I sent it not directly to him but through Krakow, to the headquarters of the 45th brigade. Engineer major A. A. Zemlyanitsyn entrusted telephone message to commander, according to my instruction.

He called Moscow on the telephone. On the wire was the national commissar of lines of communication, Lieutenant General of the technical forces, Ivan Vladimirovich Kovalev, my comrade during training in the military transport academy, the former commander for the central division of VOSO of the people's commissariat of defense.

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It was unpleasant to report to him about our inadvertence, but what I ws here to do. I report:

- Tonight seasonal flood tore away bridge in Sandomir. I took measures for restoration.

- Save the bridges on the main line !

I returned to Krakow, I ordered to brigade commanders to increase the protection of bridges. At this time from Steinau, from the front, commander Zemlyanitsyn returned. He looked tired and in need of sleep. I seated him on the sofa and asked him to describe the visit to marshal Konev.

- I went in to see him, says Anatoliy Alekseyevich. - I was shaking. For the first time in my life I see the marshal. He sits at the table. He clenched his head in his hands. He asks me: "what's going on there"? I answer: "the bridge was washed out in Sandomir". He says: "You lose one bridge, and I lose them all ! Tell Kabanov: to restore it faster" !

Actually, in the auto-road builders, whom General M. V. Olekhnovich commanded, hardly a bridge survived. These were apparently the bridges, that Ivan Stepanovichh in mind, when he said: "I've lost them all!"

Zemlyanitsyn had just left - when I heard the buzzer. I answer phone and the commander of the 44th path battalion Lieutenant Colonel Stepanov reports:

- General Maximov is not doing well. It's his leg. They warmed it with sand - it does not help. Condition with each hour deteriorates. What do we do?

- Transport him immediately to the Krakow hospital !

- Doctors object. To patient not only it is difficult to be moved, but even to rest. The leg reddens.

It means gangrene begins. Each minute is precious. I get into the motor vehicle, go to the battalion. Matvei Andreevich is my closest, oldest friend. Together we studied together way back in the school of VOSO, together served in the 2nd railroad regiment. He was there chief of staff. Together shared grief and gladnesses. But now with him - misfortune.

With difficulty I took Andrey Matveyevich to Krakow. Doctors inspected hom, gathered consultation. I sit in the corridor of

hospital, I await "sentence". Chief medical officer emerges and he says:

- The leg must be immediately amputated !

I urgently called to Moscow to the commander of GUVVR General Prosvirov.

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I reported misfortune with Maximov and about the conclusion of doctors. Prosvirov, after listening to me, thought, then heavily he sighed:

It is better to live without leg than not to be live at all. There is no third option. Let them amputate ....

Surgeons performed operation. In Krakow the wife and daughter arrived from Moscow to see Matvei Andreevich. When wound healed, I sent them all to Moscow. So Matvei Andreevich remained without a leg. After this he worked several years in the apparatus of GUVVR and died at his post of the deputy commander of central board.

I remember, when I from the hospital returned to the

headquarters of the administration, on the telephone called the commander of bridge train No 416 A. I. Zhukovskiy:

Pavel Alekseyevich! High water has damaged support on the bridge across the Raaba [Raba]. The movement of trains is temporarily stopped. But don't worry. People are at their stations, soon damage it is corrected.

- Aid is necessary?

- We will fix it ourselves.

In about an hour-and-a-half Zhukovskiy reported:

- Bridge was corrected. The movement of trains is resumed.

In the morning of following day one additional trouble. I got a telegraph message from Moscow. Peoples Commissar for the poor organization of the protection of Sandomir bridge, which led to its destruction by spring water, reprimands me. My first penalty during entire time of war! Bitter pill. But there was nobody to blame it on but myself. -

But troubles continued to pursue us. Soon on one of the transit

exchanges near Krakow armed train derailed. To the place for accident I left together with Zingorenko. We arrived, we look: at the exit from the station the steam locomotive stands under the the steam, after it - several cars falling off the rails. Ties are broken by wheels. It is necessary to urgently overhaul track and on it to place the fallen cars. I proposed to assistant stationmaster to gather local railroad workers and to remove damage. People were gathered rapidly, brought jacks "bullfrogs"(counter weight device). They began to repair roadbed, to heave cars. Us approached an elderly Pole and, indicating the switch, he said:

- Military comrades ! Cross piece does not fit. On it occurred the accident.

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- And why did they not change earlier? - asked the Pole Grigoriy Isaakovich.

- About that should know the commander sir of station ....

- And where is this commander?

I looked on the workers. Nowhere was he evident. I sent

messenger after him. Still from a distance I saw how importantly, and leisurely he headed our way Pan-commander of station. On his long flat face was a haughty smile. He reported:

- I am the commander of station. What can I do for you?

- Why weren't you on the spot of accident?

- I always on the spot have watchman. He is obligated to take all measures.

- And you do know that in the case of accident all necessary measures must take the commander of station himself?

- But according to the rules of our railroads this is not my responsibility.

I see, Zingorenko is agitated very deeply. The commander of station quietly stands, impassively he looks on the workers, as if nothing had happened. Grigoriy Isaakovich asks him:

- the substitution of unfit cross pieces is also not your responsibility?

On stone face of the commander of station the expression of fright flickered. The question of Zingorenko hit home. I did ask him directly:

- Does this mean, that you did organize accident in order to detain our train with shells? For whom do you work? The killers of your Polish people?

Poles grew quiet, they listen. Their expressions are severe, condeming. In their eyes are anger and hatred for the traitor. They excellently know what German fascism is. How many by the hands of Hitler hangmen perished their relatives and close ones ! It seems, not on this earth is a place, not stained with blood. And now the Red Army has arrived, which saved the Polish people from the unavoidable death, and suddenly among Poles proved to be a man, who harms Soviet soldier-liberators. From the crowd of Polish citizens were given the angry voices:

- Try him, the traitor !

To us it was there is no time be occupied by the analysis of this affair. We hurried to more rapidly open up the movement of trains. It was impossible to raise cars with the aid of the primitive devices.

There were no sifts. Shells were reloaded into empty cars and sent further.

The Fascist-German secret service agency performed sufficiently actively. It arranged in our rear not only sabotage, but it dissemenated various provocative rumors, sowed panic among the population. In my memory one additional case of those difficult spring days remains. When high water still gathered force, to me turned the agitated, blushing commander of the 68th battalion of the 7th brigade Lieutenant Colonel M. Ya. Kozhevnikov:

- Comrade General ! You did listen to local radio?

- I don't have time for the radio, bridges will fly!

- They recently reported that in the foothills of Carpathians in Vistula the German soldiers destroyed dam. A wall five meters high is moving down !

I visualized how many misfortunes can cause this avalanche of

water. Even before this the inhabitants of Krakow had told me, of a similar case. All the bridges were washed away. I immediately called brigade commanders, ordered to urgently transport stone to the Vistula bridges, to store bags with the sand. To take all measures to meet the wall of water coming from the mountains. I sent Chief of staff to the commandant of city with request to mobilize population. To the rescue operations moved out entire Krakow. They began to make the embankment of the immersed zones, to fortify supports on the bridges. A day passed, the second day, but wall did not appear. Soon we learned, that the alarm was false. Hostile agent attempted to sow panic among the population.

In one of the alarming sleepless nights the person on duty reported:

- You are requested to the telephone by General Ivan Vladimirovich Kovalev!

I hear the familiar voice:

- How are you, Pavel Alekseyevich, what, if we appoint you as the commander of GUVVR and railroad troops?

From the unexpected contingency I nearly dropped the receiver.

No one to me even about this hinted. I liked my present position. I got accustomed to the people, they became close to me, dear. With them I shared all adversities of war. Together we had retreated, together we now lay railroads to Berlin.

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And thus, the most decisive moment before the assault on Fascist lair, suddenly to part with my comrades. On no account ! I think, I keep silent. Kovalev patiently awaits response. It is obvious, that he understood my position. Finally I collected my thoughts, I say:

- Let us postpone this conversation. Let us take Berlin, then we solve.

- Impossibse, give agreement immediately !

- It doesn't make sense somehow ! They only recently reprimanded me and you suddenly propose this promotion ....

- The penalty was imposed correctly. But I will present you to the new post in GKO!

- Again I ask, leave me at the front until the termination of

war !

- O.K.,let us think. Goodby !

Later I learned, that when Ivan Vladimirovich talked with me on the telephone, in GKO had already been examined the request of the NKPS about my appointment as the commander of GUVVR and railroad forces of the Red Army. From the tone of General Kovalev's conversation I understood that my fate was solved. I did not go to bed that night. Agonizing thoughts did not leave my head: Will I be able to manage this enormous affair? The railroad forces in the country are in 10-15 greater than at our front. And how will I part from the comrades, look into their eyes? What they will think? They will say: "He ran out from the front, he pursued the high post". Possibly, these were naive thoughts, but they greatly disturbed me then, and gave not one minute of rest.

Within a day or two I obtained a written order from Peoples Commissar about my new appointment. Order was dated on 2 April 1945. To me it was proposed immediately to leave for Moscow and to begin the performance of its responsibilities.

I went to report about this to the command element of front. I visited General N. P. Anisimov, then - V. D. Sokolovsky, from him -

onto N. G. Kal'chenko. I talk, I say goodbye and do not believe that tomorrow I will no longer see them. On my heart is a stone. I did not note, how I got to marshal Konev's office. I entered it, I reported about the new appointment. Ivan Stepanovich arose, he congratulated me, but on bidding farewell he nevertheless needed me.

- Kabanov, he wanted, in Moscow to work! But it's a pity, that you will leave, now begin the most interesting events !

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Our command collective saw me off warmly. My first deputy, Colonel Brykin, did take out from the map case his notebook and did say:

- To you, Pavel Alekseyevich, obviously, will be not-without-interest to know, how many front railroads we in the years of war did restore?

And he called numerals - 22 thousand kilometers. Furthermore, about 2500 bridges, more than 400 water-supply points and more than 11.5 thousand kilometers of the lines of communications.

From 1942 through 1945 the head sectors of our front received

about 11.5 thousand trains, or 303.5 thousand cars with military cargoes. Within this time our operating personnel sent off 264 thousand loaded cars.

Our miners rendered harmless more than 215 thousand mines, also, about 6 thousand unexploded bombs and shells!

- And how selflessly, without stinting their efforts forces, worked our people, said M. B. Yakhnovich. - The government highly evaluated the services of soldier-railroad workers of our front. Two of us became Heroes of Socialist Labor, 16 people were awarded the Order of Lenin. In all were rewarded with orders and medals 9800 soldiers and officers. The national commissar of lines of communication designated 353 people as "honorary railroad worker". - after glancing at me, Yakhnovich smiled: - Pavel Alekseyevich has four such narkom (Peoples Commissar) honors and one reprimand !

Altogether our soldiers and officers obtained more than 5.5 thousand different narkom awards.

In my farewell speach I with agitation spoke of those, with whom I passed the difficult roads of war from Volga to Neisse: about the hero miners A. P. Yusov, V. I. Stepanov, G. I. Chistyakov, A. K. Zhilenko, V. K. Vochek, N. N. Shevchuk and their heads A. S.

Onufriyeve, P. A. Frolov, A. A. Zemlyanitsyn, G. M. Tatarinov. I said that never will I forget our remarkable technical scouts: L. Ya. Berkovskiy, K. I. Bergmann, B. P. Vasil'yev, I. S. Frolkin, L. I. Brodskiy, A. A. Sagaydak, A. I. Zykov, S. K. Yusov, D. M. Petrov, M. V. Voinov, I. G. Raevskiy, I. N. Kvashali, P. P. Lavrinovich, A. L. Frenkel, G. I. Markov, A. D. Solyanik, N. I. Kuvshinov, A. G. Palachut. I recalled our planners, supply workers, operating personnel.

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And certainly, I rendered proper gratitude to our political workers: Yakhnovich, Polotev, Ershov, Leonov, Lipovskiy, Ugliitskiy, Budakov and to all communists. They cemented the ranks and they led people to heroic, selfless labor in the name of the dear native land by their example! They with their live inspired word educated soldiers and officers in the spirit of devotion to the great affair of our party. Their loyal assistant in this noble task was our newspaper "For the Rout of Enemy".

Our conversation, which summed up the results of the combat activity of brigade in the years of war, even far beyond midnight.

I relinquished command of the railroad forces of front, to Major

General Yefim Ivanovich Pirogov. Together with him we as early as 1929 served in the regimental school. He had passed, as many representatives of my generation, the path from the soldier to the General.

Thus, behind remained the years of war, front working days, my combat friends and companions-in-arms.

The commander of the bridge train already familiar to the reader, A. I. Zhukovskiy, gave to me his biaxial official car - "the box". The movers connected car to the tail of passenger train. I sailed in my "box", as if on the violent sea. It threw car from the side to the side, shook, tossed up. I could neither sleep nor read. Somehow I made it to L'vov. On the platform the deputy commander of railroads A. I. Grigoryev met me. He persuaded to stay in the city for 2-3 hours. At headquarters was a general road conference, and he greatly requested that I appear and describe the situation at the front.

- Appear, persuaded Grigoryev, and then let us go to Moscow in comfort !

Much in my life was connected with the L'vov main line. The reader remembers that here, even before the war, our 5th brigade

built alternate tracks. Recently the railroad forces of front restored L'vov junction and some sectors of railroad. I knew its many people and had warm feelings for them. how could I refuse them a request !

After conference and inspection of junction the heads of railroad conducted me to Moscow, as they promised, with the comfort - Fast train, in the had sleeping compartments. After "box" usual passenger car seemed to me paradise.

end section.

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WE WON !

In Moscow I immediately lost myself in work. However, on 11 April, during the first day of my arrival, General Prosvirov shed his responsibilities of the commander of central board and gave to me, as they say, the reins of control. He was liberated from his position unexpectedly. Spring ices of Kerch straits cut through the crossing elevated across it. The railroad troops of UVVR-12 of the 4th Ukrainian front had built it. Commander of UVVR-12 was General P. M. Zernov. However, the construction of bridge was headed by I. D. Gotseridze'. When nature destroyed bridge, Nikon Andreevich had to answer for this.

As early as April 1944 guidance of GUVVR and the railroad forces was united and transmitted to Prosvirov. The former commander of GUVVR General V. A. Golovko became ill and transferred to work in the NKPS apparatus. Thus, by succession and upon order of NKPS I became simultaneously the commander of GUVVR and railroad forces. Upon my request the Peoples Commissar assigned General Prosvirov as my

deputy.

To the reader it is known that I knew Nikon Andreevich aalready many years. In spite of his abrupt character, I had for him a deep respect. He wonderfully knew his business, he possessed great efficiency, in relations with the people - He was strict, but he was fair.

As has already been said, GUVVR was formed on the base of the command cadres of a particular corps. Furthermore, the NKPS isolated from its apparatus into the new central board the outstanding specialists of different branches of railroad administration.

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Thus, GUVVR apparatus was formed from people highly qualified, mobile, capable of solving the most complicated problems of the restoration of roads and mane-made constructions. There were people almost all familiar to me, dedicated to transport. To lead them I considered a great honor.

A strong apparatus imposes high requirements on its leader. For me these requirements were increased by the strained situation, which was formed at the front. Combat for Berlin occurred. The Red Army

freed Czechoslovakia, Hungary, Austria, Yugoslavia, and routed enemy on the Baltic coast. Everywhere railroad troops and the special-formations restored track in the wake of the advancing armies. Simultaneously were errected bridges on Danube, Tissa, Neisse, Oder, Spreey, Western Dvina, Vistula, Niemen .... The third, terminating period of war approached. Military history had never known such an enormous front of operations nor such high tempos of their execution. Within the short period of the completing stage of war our railroad troops and special-formations restored and altered about 57 thousand kilometers of railroads, of them more than 32 thousands in the territory of West European states. They introduced 1827 bridges with a total length of 184.2 thousand meters into operation. Simultaneously were built new and were reinforced temporary main lines put into operation in the years of war main lines in the territory of our country.

As the commander of the railroad forces, I want briefly to describe the activities of military railroad workers in the last operations of the Great Patriotic War.

Berlin operation was begun on 16 April, 1945. In it participated the 1st, and the 2nd Belorussian and the 1st Ukrainian fronts. At the beginning of operation on the 1st Belorussian front, over the Oder only one railroad bridge in Kuestrin (Kostrzyn) bridgehead was

operational. Enemy excellently understood the value of this construction. On 18 April he bombed out bridge with the aid of the winged missiles. At this time to the front troops it was urgently necessary to deliver heavy railroad artillery. But the sector of Kuestrin (Kostrzyn)-Berlin track was not restored, bridge, as has already been spoken, was destroyed. Marshal G. K. Zhukov who commanded the 1st Belorussian front, ordered the railroad workers to urgently restore bridge and main line. Brigades fulfilled the order of commander.

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The guns arrived in Berlin in proper time and helped the advancing armies to storm the capital of Fascist Germany. At the height of combat on the streets of city, on 25 April, there arrived the first train.

The commander of the rear of the 1st Belorussian front, General N. A. Antipenko, the commander of VOSO, General A. G. Chernyakov, and the commander of the railroad troops, General N. V. Borisov, immediately telegraphed to the military council: "Report: today, on 25 April, at 18.00, the sector Kuestrin (Kostrzyn)-Berlin was opened to the movement of trains up to the stations Berlin-Lichtenberg". Under the text of telegraph message marshal G. K. Zhukov gave a

comprehensive estimate of the feat of soldier-railroad workers: "fine people" ! By 3 May the railroad forces of the 1st Ukrainian front restored Kotbus-Lyuben-Berlin line.

Brigades and special-formations of the 1st and 2nd Baltic fronts (commanders of the railroad forces Generals M. G. Stupakov and I. S. Kartenev, the commanders of political departments Colonels I. N. Gurevich and I. G. Trager) during April confronted high water, struggled to preserve the bridges. After managing this task, they were occupied with the fundamental restoration of railroads.

The enormous volume of works fell to the lot of the railroad forces of the 3rd Belorussian front. General A. P. Smirnov commanded them. Colonel M. I. Sokolov was the commander of political department. The front roads of eastern Prussia restored by these troops. They put into operation main axis to Koenigsberg (Kaliningrad) on the third day after the taking of this city. For distinguished execution of combat assignments, the 1st and 26th brigades, commanded by Colonels A. S. Dugin and A. M. Kuznetsov, were named by the supreme commander-in-chief the "Koenigsberg" [brigades].

As early as February to the aid to the railroad workers of the 3rd Belorussian front GUVVR was sent the 25th brigade under the command of General S. A. Tarasyuk. It was transferred from the main

line of the 2nd Baltic front to the Insterburg (Chernyakhovsk) - Koenigsberg sector, where, before the appointed time, restored large bridge. All soldiers and officers of brigade were rewarded with medals "for the taking of Koenigsberg".

The railroad workers of the 2nd Belorussian front restored the main line from the boundaries of our country in Gdynia.

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Colonel P. I. Bakarev commanded them - former commissar of the 5th brigade. Colonel V. N. Angelin was the commander of political department. It was necessary to alter and to restore the strongly destroyed track on the metal ties. By 1 April these works were carried out. On 18 May trains went to Stettin, and on 22 May - to Rostok.

Roads to Bratislava, Vienna and Brno were restored by railroad brigades and special-formations of the 2nd Ukrainian front in the wake of the advancing armies. The Major General of the technical troops, S. N. Belyayev, and the commander of political department, Colonel F. M. Tarasov, commanded them.

The armies of the 3rd Ukrainian front freed the capital of

Austria-Vienna. Our troops and special-formations under Major General B. I. Pavlov's guidance, provided the following railroads: Szekesfehervar-Papa-Sopron-Vienna and Szekesfehervar-Vesprem-Graz. On 13 April was liberated Vienna. By the end of the following day our first train arrived in the capital of Austria.

Simultaneously with the restoration of train movement on the front railroads, as I already said, GUVVR deployed the fundamental restoration of track on the rear main lines. The track development of Leningrad junction, Murmansk port, and also reinforcing of the sectors of Kirov, the October and Estonian railroads was done by brigades and special-formations UVVR-2 and UVVR-11. General V. Ye. Matishchev and director-Colonel M. Z. Dudolyako commanded these troops. Colonel Ya. M. Mayorov and Lieutenant Colonel S. L. Boyko headed political departments. The main lines of Donbass and Kriborozh'ye were constructed by troops of UVVR-6, which General L. V. Bezvesel'nyy led. UVVR-12, under the guidance of General-director of tracks and construction, P. M. Zernov, were assigned to reinforce North-Caucasian railroad and Tuapse- Sochi sector. At this time there developed urgent need to complete the initiated before the war construction of high-mountain Irkutsk-Slyudyanka mainline, that goes around lake Baykal. In this sector the central board sent UVVR-1 of General F. N. Doronin. National economy needed large transport main lines in Urals. To reinforce Sverdlovsk and south Ural railroads we

transferred from the 2nd Belorussian front the UVVR-9 of Colonel P. I. Bakarev.

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The redislocation of the railroad troops took much time and energies of all workers of GUVVR. But ahead of us even greater moves waited. Militarist Japan broke neutrality pact with the USSR and it in every way possible helped Germany in the war against our country, it kept in Manchuria the large groupings of the troops, the so-called Kwantung army, it impeded the commercial shipping of the Soviet Union with the USA. Therefore our government denounced on 5 April, 1945, the Soviet-Japanese neutrality treaty. The operational commands of our people's commissariat and the planned economic department developed the drafts of a plan for the mass transportation of the troops to the east of the country. For the realization of this plan it was necessary to conduct great operations on the technical reinforcing of Trans-Siberian main line, including roads of the Far East.

This instruction soon I obtained from the Peoples Commissar, I. V. Kovalev. He ordered me to transfer to the Far East a number of brigades and restoration directorates.At conclusion of our conversation Ivan Vladimirovich proposed:

- Become acquainted with the condition of the railroads of Manchuria !

Conversation with the Peoples Commissar really worried me. The railroads of Siberia, Transbaykal and Far East were in poor state. "These railroads had a shortage of 30 thousand most experienced railroad workers, undertaken for manning the movable military-operational and military reconstruction special-formations, which were made up the fronts, acting against Hitler Germany. Furthermore, for restoration and servicing of front railroads were sent all available reserves of rails, ties and of points and crossings, and also significant part of the steam-locomotive motor pool. On the Trans-Siberian main line there lay on the track many rotted ties and worn rails, including 11 thousand broken and highly defective rails, which considerably limited the speeds of the movement of trains and, consequently, also the total capacity of main line. Subgrade in some sectors required strengthening, especially in the sector, which passes along Baykal coast, where even before the war there was initiated, but never completed, work on the construction of revetment and the repair of emergency tunnels. It was proposed to go around this sector in connection with its large vulnerability to enemy aircraft, after constructing a new line

somewhat south of the existing main.

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However, in connection with the war construction begun in 1941 it was preserved" [1].

FOOTNOTE [1]. I. V. Kovalev. Transport in the decisive operations of the Great Patriotic War, page 42. ENDFOOTNOTE.

Now we were required to take these measures:

- to strengthen the railroads of this area of the country by steam-locomotive motor pool, to create the reserve of cars;

- to repair tracks and to conduct supplementary track development for a number of stations in the areas of the mass unloading of the troops and everything necessary for combat;

- again to begin the construction of railroad line Irkutsk-Slyudyanka around Baykal.

All that had to be done, cannot be enumerated.

GKO, taking into account the established situation, made the decision to create the Far-Eastern district of communication lines. As the commander of district was assigned the deputy of Peoples Commissar of lines of communication V. A. Garnyk, and as commissioner of central division VOSO - the deputy commander of military communications of the Red Army, General A. V. Dobryakov.

Upon the order of Peoples Commissar during April we relocated several railroad brigades and special-formations of the NKPS to the Far East. 25th brigade of General S. A. Tarasyuk - to the Far-Eastern and the Amur. After the termination of restoration works in Czechoslovakia on the *Primorskiy railroad* arrived UVVR-8 headed by General A. N. Shishkin (true, in with only the 3rd brigade of Colonel D. G. Vasil'yev). UVVR-14 - of Major General of technical forces V. A. Chigarkova, was sent to Transbaikal. And nevertheless for the execution of all works of military units and special-formations this was insufficient. To help it the NKPS formed at the sites approximately 80 different restoration trains and mobile detachments. Within the short period our troops and detachments of special-formations carried out the works designated by the plan to restore eastern course of Trans-Siberian main line. The 25th brigade finished the construction of the Zavitaya-Poyarkovo line initiated before the war (89 kilometers), it also reinforced the ferry crossing over the Amur at Blagoveshchenk.

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So that the reader could better imagine the volume of works carried out by us, I will say that the Far-Eastern groups of the Soviet forces at this time was based on main line from Irkutsk to Vladivostok 4140 kilometers. It adjoined many different lines. Their total length was approximately 2700 kilometers. Furthermore, 800 kilometers of the narrow-gauge roads of the Mongolian People's Republic. This was the area, which was reinforced and prepared for the war with imperialistic Japan by our railroad troops and special-formations.

At night we with the commander for the control of track, General-director Vladimir Nikandrovich Gayev, solved a number of important matters. When conversation was finished and Gayev left, I turned over the leaf of table calendar. 9 May. Already one day of war. Telephone bell was heard. In the receiver was a voice familiar to the reader that of the Peoples Commissar:

- Ivan Vladimirovich invites you into the hall of conferences of board !

"What's going on - at 2 A.M. a conference of board"? In the semi-dark corridor the sounds of steps are not audible on the strip of carpet. I enter into small hall. At the table, as usual, sit the members of board, the commanders for central divisions. Mood in all elevated.

I ask:

What did happen?

- We await special report about the surrender of Germany.

Gladness cut off respiration, I rushed to congratulate colleagues. At this time entered smiling General Kovalev:

- Dear friends ! Fascist Germany surrendered !

Cries of "hurray", applause. In all eyes are tears. The long years of the strenuous work and deprivations was now behind. On this night no one lay down to sleep. In the morning I gathered workers of GUVVR, congratulated them with the victory.

Within several days after victory, now I do not remember, in whom and under what circumstances, arose the idea to conduct

military-technological conference. I conferred with my substituents and assistants. They decided to at first to call a meeting of the leading workers of our forces, and then conference. The goal of the meeting and conference - was to analyze the participation of the railroad forces in the war with Germany, to share experience, to outline further prospects for the development of our work.

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They prepared the report to Peoples Commissar. Ivan Vladimirovich read it, he smiled:

- For a long time we have not met together, do we miss each other? Well, in the principle I am agreeable. Prepare conference for June.

There was little preparation time. As they planned, before the conference there was a meeting of key personnel of GUVVR and railroad forces of fronts together with the executives VOSO and people's commissariat of communication lines. At this conference I presented some results of the work of the railroad forces and special-formations in the years of the Great Patriotic War, drew some conclusions and generalizations. Then with a thorough report, dedicated to the results of the party-political work in the forces,

the commander of the political department of Chief Directorate of Military Reconstruction Work Major, General Vasiliy Fedorovich Fedorov, appeared.

I still have the verbatim account of this report, in which in specific facts is shown the enormous work, accomplished by political workers, party and Komsomol organizations during the years of war, was shown the leading and guiding role of the party in the daily combat life of our troops, in their successes in the struggle with the worst enemy of humanity - German fascism. Communists by personal example and by passionate word inspired soldiers to the military and labor feats. When under the enemy fire it was necessary to lead attack, to restore the destroyed track and structures, the communists were the first to rise.

Growth in the numbers of the party and komsomol during the years of war was considerably higher than in the prewar time. Thus, the party organization of our railroad forces grew from 11.5 thousand members and candidates of VKP (b) in 1941 to 65 thousand members and candidates of the party in 1945. Komsomol organization increased from 30 thousands to 60 thousand people. Whereas in 1942 party component in the railroad forces was 7.1 percent, in 1945 - it was almost 20 percent. Altogether in the years of war were accepted into the members VKP (b) 27847 people, as candidates for membership in the

party - 45746. The VLKSM [All-Union Lenin Young Communist League] admitted 48355 people. Soviet people during those severe days even more clearly realized and they felt the great meaning of Leninist words about the fact that the "party is the mind, honor and the conscience of our epoch".

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- Under the leadership of the party soldier-railroad workers, said V. F. Fedorov, made a significant contribution to the victory over the strong and insidious enemy. For this the native land and the party are grateful to them.

During February 1945 "Pravda" noted: "In the chronicle of the Great Patriotic War of Soviet people against the Hitler aggressors honorary place will be given to the heroic feats of military railroad workers".

The Communist Party and the Soviet government highly valued the mass labor and combat heroism of soldier-railroad workers. In the war years 28 Generals, officers, sergeants and soldiers were awarded the highest decorations - the ranks of Hero of Socialist Labor and one - Hero of the Soviet Union. 35469 soldiers were presented decorations and medals.

For valor and courage, revealed in combat with the Fascist-German aggressors, for distinguished execution of the goals of government for erecting barriers and restoring railroads the 28th railroad brigade was converted to the 1st guards, was obtained the honorary designation of Varshavsky, it was rewarded with the order of Kutuzov of the 2nd degree. A number of other large formations and units were awarded government decorations and obtained honorary designations. The 29th brigade was rewarded with the order of Kutuzov of the 2nd degree and with the Order of the Red Star, it was awarded the designation of Varshavsky. The 5th brigade was awarded with the Order of the Red Banner and obtained the designation Poznan. On the banners of the 1st and 26th brigades glitters Aleksandr Nevskiy's order, and these brigades carry the honorary designation of Koenigsberg [brigade]. The banner of the 19th brigade decorates the order of Kutuzov of the 2nd degree, the 45th brigades - order of Bogdan Khmel'nitskiy of the 2nd degree and the 47th brigades - Order of the Red Star. The distinguished decorations of the native land were obtained also by many of our battalions and regiments. 2nd, 20th, 77th bridge, the 10th and 81st track battalions were rewarded with the Order of the Red Banner. 11th, 15th and 83rd restoration battalions, the 2nd and 12th operational regiments - by Order of the Red Star.

I admit that after the abundance of urgent, daily affairs I could not always know about the heroic dealings of many our units. And therefore during that day with enormous interest I listened to report and visualized, by what in the victory colossal labor/work was invested, the courage and valor that was required on the part of our people.

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Evidence of this are the following examples. On 25 May, 1942, on one of the frontal sectors the enemy aircraft dropped on the station more than ten time bombs. One of them fell between the cars of the personnel train. The propaganda instructor, junior political instructor Khmel'nitskiy, and deputy commander of company, Senior Lieutenant Gryaznov, disregarding danger, picked up this bomb in their hands, took it to vacant land beyond the limits of the station, where miners arrived soon and exploded it.

Large courage was required from soldier-railroad workers of the group of sergeant Vorobyev in order to save armored train from the fire of hostile artillery. Armored train, maneuvering on the station tracks, fired on and annihilated German manpower and personnel, which

counterattacked our units. But then order was obtained - to change firing position. And at this time an enemy shell landed on the switch, which was on the route of armored train. Enemy increased artillery and mortar fire on the station. It seemed it was impossible to get to broken points and crossing. And Vorobyev and his soldiers now arrived to help. Dodging the explosions, after hitting the ground for an instant in the still smoking craters from the shells, they made it to the armored train and found the area of the undamaged switch. They rapidly dismantled it, loaded it on wagon and took it to the place of the destroyed one. Soldiers under the sustained fire of enemy retracted the remainders of the disabled switch,cleared area and installed the new one. Steam locomotive gave signal, and armored train pulled out of the station.

But Vasiliy Fedorovich meanwhile continued:

- One of the main combat traditions of our troops, which invariably contributed to the successful execution of the goals of command element, this was close combat friendship and skillful cooperation with the units of different kinds and types of the forces: with the infantrymen and the tankers, the pilots and the artillerymen, the sailors and the sappers. The essence of this friendship is well expressed in the letter of the soldiers of the renowned 8th guards of Panfilov rifle division. During March 1944

they addressed a letter to the military railroad workers of the 2nd Baltic front, in which they wrote:

"Soldiers-railroad workers, combat friends ! You go behind us, restoring the destroyed railway line.

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The native land has given us an important job, on success of which depends the uninterrupted supply of front with all necessary for the rout of enemy. We, guardsmen, Privates, sergeants and officers, turn to you with request. More rapidly restore railroad main lines, faster supply trains with ammunition, weaponry and the equipment - this is necessarily for our successful advance forward !

Restoring bridges, communications, water supply, laying tracks, do not stint on forces, perform in the manner of our guardsmen in combat. Only before the appointed time fulfill restoration missions ! Remember that we await you. Advance in the labor. This is your aid to front, your contribution to the cause of victory !

We do not doubt the fact that each of you will exert all effort, give all your energy and capabilities in order with the honor to fulfill the combat order. We await your reports about the early

restoration, the glorious situations at the labor front. Fulfilling the order of the native land, the call of the party, we even more greatly will increase pressure in combat henceforth we will destroy enemy in manner of the guards, annihilate and chase him from the limits of our sacred ground.

Long live our great Soviet native land !

Forward to victory over the hateful enemy !

Death to German occupationists" !

In response to the call of Panfilov guardsman military railroad workers accelerated the tempos of the restoration of railroads and rapidly gave green light to the trains, which delivered to front all necessary for combat.

The commander of the 1st Ukrainian front, General of the Army N. F. Vatutin, during December 1943 noting the selfless labor of soldier-railroad workers, wrote: "By their selfless work, which frequently borders on the heroic feat, the restoration units of our front exert the forces inestimable aid.

Without the rapid restoration/reduction of railroads destroyed

by the retreating enemy it would be incomparably more difficult, and sometimes simply not possible to solve many important problems of offensive.

The role of military railroad workers in our sacred war against the hateful enemy is very great".

- the history of the Great Patriotic War, said V. F. Fedorov, in full of such high acclaim for the combat activity of soldier-railroad workers.

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The military council of the 1st Belorussian front directed to the command element of the railroad forces the following telegraph message: "we congratulate all personnel with the completion of the construction of the bridge across Vistula river in the city of Demblin, produced within the record time. Your soldiers, sergeants and officers rendered inestimable service to the soldiers of front in enabling their further rapid pursuit of enemy by your heroic work.

For the selfless work we declare commendation to all personnel and we express the firm conviction in the fact that you henceforth, despite difficulties and complexities of situation, with honor will

fulfill any mission assigned to you".

- Documents and living examples - bright certificates of the selfless labor of military railroad workers, their fraternal friendship with all soldiers of the Red Army.

Vasiliy Fedorovich made a pause, took from folder several sheets of paper and said:

- I must read to you these three letters. Recently the Hero of the Soviet Union of guards captain A. V. Osip wrote: "Now, when our valiant Red Army strikes enemy in his lair - Berlin, it is desirable to thank for their work our military restorers ....

Strikes beyond the Dnepr, in Shepetovka area, Osipov wrote further, the battle for the liberation of our friend Poland, and now in the territory of Germany to a considerable extent it is successfully realized because all necessities, that the front required, we obtained in time and in the necessary quantity on the restored steel mainlines.

We saw, how at the stations, directly under the fire of enemy, worked military restorers, considering not the difficulties. Where tanks yesterday passed, military railroad workers today already work

and train after train passes. Regards to you, combat friends, and thanks from our guards" !

- And here is the second letter, said lecturer, from the Hero of the Soviet Union, pilot A. T. Alekseyenko.

"We, pilots, wrote A. T. Alekseyenko, know well about your heroic work in Dnepr, in Sozh, in Germany. Repeatedly it occurred, that the bombs, recently delivered from the station, we within the same hour brought down on the fascists. Regards to you, soldier-railroad workers, and heartfelt commendation from the pilots of our unit" !.

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The third letter, read by V. F. Fedorov, was from the Hero of the Soviet Union, Major V. D. Strel'tsov. The letter is dated 1 May, 1945.

"We, artillerymen, are especially aware of the aid, which the military railroad workers rendered us. Our people with gratitude relate to you, combat friends, who travel together with the entire Red Army toward the final victory over the hateful enemy".

General Fedorov spoke also about the great force of the friendship of the peoples of our country, which was displayed on the fields of battle:

- In each military unit hand in hand with fortitude we fought with the hateful enemy soldiers and commanders, sons and daughters of all peoples of the USSR. Among the soldier-railroad workers, awarded the high rank of Hero of Socialist Labor, continued lecturer, Russian Colonel Petrov and Colonel Dugin, Ukrainian captain Garkavenko,

Georgian Colonel Zhizhilashvili, Jewish Colonel S. G. Veytsman and many sons of other nationalities and nationalities of our great native land.

In conclusion V. F. Fedorov noted that the military railroad workers with the honor withstood severe tests, highly carried high through the fire their combat banners.

At the conference many interesting propositions about the agenda of the forthcoming conference and its organization were expressed. Taking into account these propositions we began preparation for it. So many questions were collected, that for their discussion even half a year would not be sufficient. They decided to select the most important and most necessary themes: the restoration of track, man-made constructions, water supply, organization of technical reconnaissance and organization of obstacles. But even these problems could hardly be contained in 64 reports. To listen to to all their participants at the plenary meetings would be tiresome. And was it even necessary? Why, for example, should water-supply workers or signalmen have to listen to report about the restoration of bridges? We selected 12 themes, which we opened to general discussion, the rest we divided into sections. Four sections were created: the restoration of the tracks and the steam-locomotive operation, man-made structures, the operation of front railroads, obstacles and

mine clearing.

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18 June, 1945 arrived. In the hall of GUVVR at Ol'khovka, 25 Generals and officers gathered - commanders of railroad units and large formations, the heads for the central divisions of the NKPS, the central division VOSO of the Red Army, the scientific workers of military transport academy, Moscow educational, research and design institutes - altogether not more than 300 people. Almost every other participant of conference expressed himself on one or the other report. In all there appeared 227 people. Great activity ! For further development of the railroad forces this conference had enormous value. Its many recommendations remain pivotal even yet.

Railroad workers figuratively call the trains travelling the steel mainlines with the cargoes streams. Hearing this word one thinks of violent spring high water or rush of the mountain water, which are formed after the friendly fusion of glaciers. But even this poetic image, created by working people, could not transmit the scale of that enormous volume of cargoe, which was transported on the longest in the world Trans-Siberian mainline in spring and in the summer of 1945. From May through August over the mainline proceeded 1660 trains or 136 thousand cars. About half of them (46 percent) -

during June. Trains went so close together at such rigid intervals, that to squeeze an extra train between them was impossible. And under these conditions we nevertheless contrived to move rails, ties, and switches, necessary for reinforcing the Trans-Siberian mainline itself and restoration of future front lines.

In the beginning of August the GKO created in the Far East three fronts: the 1st, the 2nd, and the Far-Eastern and Transbaikal. Marshal K. A. Meretskov, General M. A. Purkaev and marshal R. Ya. Malinovskiy were assigned as commanders. Each front GUVVR had its commands with the certain contingent of the forces. In the 1st Far-Eastern worked the UBBR-8. It was led by General A. D. Shishkin, familiar to the reader. The railroad troops of the 2nd Far-Eastern front were commanded by Colonel K. A. Parkhomenko, and Transbaikal - by General V. A. Chigarkov Colonel F. M. Tarasov.

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In the first days of August the commanders of our directorates obtained from the front commanders the following missions: to develop and to present to them for the confirmation the drafts of plans for the restoration of railroads in the wake of the advancing forces. Each Front had its main railroad axis. The 1st Far-Eastern front: Pogranichnaya-Mukden-Kharbin; the 2nd Far-Eastern:

Sakhalyan-Beyan'chzhen'-Kharbin and Sakhalyan-Tsitsikar; Transbaikal: Manchuria-Tsitsikar and Chanchun'-Mukden. Distances were enormous. Mainlines, according to available data, were in neglected condition.

In the zone of attack of Transbaikal Front there were about 1.5 thousand kilometers of railroads. From the station Manchuria to Tsitsikar was 700 kilometers, from Tsitsikar to Chanchun' - 500. In his plan for the restoration of these mainlines General V. A. Chigarkov proceeded from the fact that the damage to track will be 50 percent. Bridges will be exploded by enemy completely. Particular alarm caused the tunnel through the large Khingansk pass. Length of the construction was 3100 meters. The large bridges across Nonni river at Tsitskar could detain the restoration of roads at Taylay station. The depth of river reached 12 meters. Upon the order of commander first of all it was planned to make operational the mainline of Manchuria-Tsitsikar and Tsitsikar-Taoan'. Remaining sectors had to be commissioned second.

When marshal Malinovskiy was introduced to the plan, he for a minute thought, and then with the smile said to Chigarkov:

- I understand, the mission is difficult. But I will lighten it a little for you !. I will add small sector .... about two hundred Kilometers from Tsitsikar to Kharbin. Restore it !

In this "lightened" form the marshal approved plan. Thus, entire former Chinese-eastern railroad (KVZh) from the Otpor station to Harbin it was necessary not only to restore, but also to change (regauge) from the West European track to the Soviet. Tsitsikar station was an overload. For such a scale of the work our railroad troops at the Transbaikal Front were clearly insufficient. We hoped for the aid of the local population. Materials were not sufficient.

Difficult in profile and also very neglected was the main axis of the 1st Far-Eastern front.

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At General Shishkin's disposal was only a third of a brigade. Taking into account this, marshal Meretskov to help railroad workers designated 63-rd engineer brigade.

A no less difficult task stood also before the railroad troops of the 2nd Far-Eastern front.

The offensive of the Soviet troops was begun on 9 August. Our aviation delivered powerful strikes on the most important units of

resistance of enemy, on the large railway stations and the communication centers in the rear of the Japanese troops and its military objectives in Kharbin, Chanchun', Girin. Aviation and navy delivered strikes also on a number of ports. Offensive was developed rapidly. In five days the Soviet forces moved 400 kilometers. Under difficult conditions was developed the attack of the armies of Transbaikal Front. Already by 8 August in Manchuria there were strong rains. Mountain rivers and passes spilled, dry valleys were filled by water. Dirt roads became impassable.

The railroad forces, disregarding bad weather, immediately deployed the restoration of track in the wake of the advancing armies. We at the headquarters of GUVVR attentively followed the course of events in distant Manchuria. Reports entered one after another. And from these reports a detailed picture of the heroic labor/work of military railroad workers emerged.

Brigades and special-formations of the NKPS of Transbaikal Front introduced restored main line from the Otpor station to Tsitsikar in 28 days. They worked under the complicated weather situation. In hills hid themselves the detachments of Japanese "condemned men". On 15 August at the station Hailaerh (Hailar) they carried out attack on the group of our technical reconnaissance. Engineer lieutenant-colonel A. G. Tsabolov commanded scouts. Upon his command

the group occupied perimeter defense. A skirmish ensued. In this combat A. G. Tsabolov and several scouts perished. Comrades buried them near the Zabaykalsk station.

On 16 August in the sector of Manchuria-Tsitsikar the Japanese attacked the 2nd company of the 78th track battalion. Captain I. A. Veselov commanded company. At about 4 hours in the morning the "condemned " were noted by the patrolmen and immediately the alarm was raised. The detachment of the Japanese numbered about hundred. Company commander ordered defense. For about three hours the civil engineers with the Japanese fought. After losing more than 20 people killed and casualties, "condemned " withdrew.

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The commander of the 25th brigade, General S. A. Tarasyuk, sent special movable detachments forward for conducting of technical reconnaissance and mobilization of the local population for the restoration. This detachment was also sent for reconnaissance and restoration of the sector of Sakhalyan-Tsitsikar. The deputy commander of the 47th battalion of technical section, engineer Major N. B. Sokolov, provided technical direction of works. Company commander captain A. V. Riabov commanded detachment. Military physician Lieutenant N. I. Yudin carried out medical supervision. The

presence of doctor was necessary. In some areas, adjacent to the railroad, the epidemic of plague raged. In such areas it was forbidden to call on local residents for work. Besides three officers in the detachment there were 23 soldiers and sergeant.

At the headquarters of the rifle division advancing along the mainline Sokolov became acquainted with the operational situation and, after learning, that there was no enemy ahead, he decided to move with his detachment in the advance guard of division. The Mergen' station the scouts reached on the motor vehicles. They here found steam locomotive intact. Steam rose, a train was formed. Motor vehicles were placed in the open metal freight cars, and they themselves comfortably were seated in the passenger car. In the case of rendezvous with the Japanese, in front of the train they released the motorized trolley armed by the light machine gun. At the machine gun captain Riabov sat. On the tender they installed antitank gun, they equipped weapon emplacements in the passenger cars, and train was on its way. Towards the train came enormous crowds of Chinese citizens, who greeted Soviet soldiers. They stand in rows along the embankment and shouted: "hurray" ! The rejoicing Chinese people met the first soldier-liberators.

The track was repaired, but it was terribly neglected. Destroyed proved to be only some bridges, and partially, large stations. Our

aviation bombed them out during the first days of offensive. The Japanese had no time and nothing with which to destroy beds. Their railroad-tie breaker of system "cylinder" proved to be, not unlike the German "hook", barely effective. The "cylinder" left in its wake on the ties only dents, which did not prevent the movement of trains.

Communications remained on the entire mainline intact and unharmed.

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This made it possible for Sokolov with the aid of the interpreter to ascertain the situation of stations lying ahead and to request local railroad workers to gather the local population before the arrival of train for the restoration works. The requests of scouts, as a rule, were fulfilled. Before the arrival of train at its stations local railroad workers and population already waited. Sokolov conducted short meeting, he told about the liberating mission of the Red Army, indicated that it is necessary at the station to put things in order. After this train it departed further.

On one of the stations the local residents reported to Sokolov that in the adjacent city of Lakha the Japanese garrison was located. It was impossible to go further. Garrison numbered up to a battalion

of soldier. Sokolov here learned the surname of the commander of Japanese battalion. Among the railroad workers was a translator - Chinese. Sokolov proposed to him to ring on the telephone to railroad workers known to him at the nearest station to Lakha station and to report to them that from Kharbin to Lakha the Soviet were moving.

Craftiness succeeded. Japanese garrison was misinformed. Even on the way our detachment connected a second steam locomotive to its train. On it Sokolov sent Lieutenant Yudin back - towards the advancing division.

- Report to division commander situation and ask him to come to the aid of our soldiers. You will deliver them by your steam locomotive.

Yudin left. Meanwhile Sokolov together with Riabov prepared telephone message for the commander of Japanese garrison. Interpreter communicated its text through the person on duty at Lakha station. This is what they told him in the telephone message: "To the garrison commander of Lakha city. I propose immediately to surrender. To personnel of garrison in the barracks. Gather weaponry in one place in the area of station. Meet me personally in the North outskirts of station accompanied by an interpreter. For refusal to surrender the responsibility will be laid on you.

Representative of the Soviet troops was Major N. Sokolov".

Two hours of the strained waiting passed. Finally in the room of assistant stationmaster telephone bell was heard. Person on duty at Lakha station reported:

- garrison commander accepted the proposition of Major Sokolov about the surrender.

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After taking the necessary precautionary measures, detachment moved to Lakha. On the way to city Chinese railroad workers reported to the scouts:

- In the dry ravine near the bridge lay the Japanese.

Sokolov ordered to detachment to prepare for combat, and to machinist - to give it more steam. Steam locomotive with the roar rushed toward the bridge. The Samurai without the single shot scattered in all directions. At Lakha station the garrison commander met train. He was escorted by two people, not one, as it was agreed.

The adjutant, who according to the Japanese military etiquette, must be always with his commander, proved to be the second. In other respects the Japanese satisfied the terms of surrender proposed by Sokolov completely. Soldiers were situated in the barracks. Weaponry was laid down in the station.

To greet Soviet soldiers there arrived tens of thousands of townspeople. In their hands were red flags, many bore banners. A large brass band played. A meeting directly on the station square took place. Sokolov first appeared. After him the representatives of city. They thanked the Red Army for the liberation from the Japanese occupationists. At the height of celebration the whistle of steam locomotive was given. To the station a train with the Soviet troops arrived, led by Yudin.

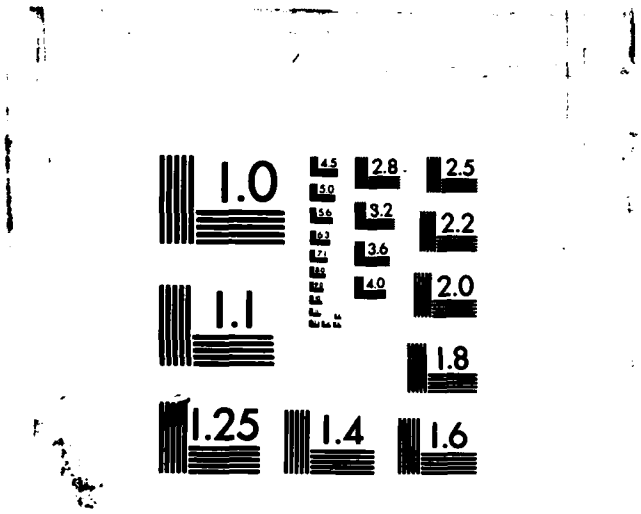
Scouts transmitted captured Japanese and their weaponry to the commander of the arrived battalion.

For about two hundred kilometers Sokolov's detachment moved ahead front of the advancing troops of the 2nd Far-Eastern front. Entire track from Tsitsikar to Kharbin was restored and was regaged by local railroad workers and population on the instructions of Sokolov. The first train from the Manchuria station to Harbin arrived on 28 August. With this train to Kharbin arrived the deputy of

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NATIONAL BUREAU OF STANDARDS-1963-A

Peoples Commissar of lines of communication V. A. Garnyk, visiting editorial staffs of the newspapers "whistle" and the "Red Star".

With the weaponry in the hands, the 3rd railroad brigade of Colonel Vasil'yev restored and regaged the mainline of the 1st Far-Eastern front Pogranichnaya-Mukden-Harbin. After several days the soldiers and the officers of brigade repaired and regaged 672 kilometers of track, they restored 42 bridges, performed track development of Khabarovsk junction. In the process of the regaging of track about 240 thousand ties were changed. The daily mean tempo of works was 29 kilometers of finished track.

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In August the brigade repelled ten attacks of the Japanese forces. In these battles were annihilated 140 hostile soldiers and officers, more than 500 people were taken into captivity.

The lightning rout of the Kwantung army numbering more than a million stupefied Japanese militarists. On 2 September, 1945, Japan signed the Act of unconditional surrender.

The contribution to the victory over the strong enemy on the part of our soldier-railroad workers was significant. From 9 August

through 30 September on the mainlines of three Far-Eastern fronts they restored and regaged to the Soviet track 2600 kilometers of main tracks, also, about 1000 kilometers of station tracks. Actually this was not restoration, but the major overhaul of the neglected/Manchurian railroads. In the sectors of Manchuria-Kharbin-Pogranichnaya alone was it necessary to replace 485 thousand ties and 3166 rails. Furthermore, on the front railroads our soldiers and officers together with the detachments of special-formations made operational 5 tunnels, 99 bridges, 54 water-supply points, 37 thousand kilometers of lines of communications. Large engineering experience and enormous labor of soldiers was required for the establishment of direct line of Moscow-Khabarovsk communications. Personnel of the signal battalion of the 25th brigade under the guidance of its commander, captain V. Ya. Pavlikhin, most experienced specialist, laid cable in the bottom of amur and satisfied mission.

In the battle in the Far East soldier-railroad workers showed new examples of the selfless labor. A sector of Manchuria-Anansi 665 kilometers long was restored and regaged to the Soviet track in 20 days. The tempo of works was 33 kilometers of finished track in a 24 hour period. The Tsitsikar-Harbin sector 200 kilometers long they regaged to the Soviet track in two days. These were only a few of the examples of the labor and combat heroism of our soldiers in the war

against imperialistic Japan.

The Great Patriotic War of the Soviet Union, and together with it, the Second World War was finished. " In the giant military conflict with the imperialism and its most monstrous generation - fascism was conquered by socialist social and state order.

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The sources of the strength of the Soviet Union were socialist economy, socio-political and ideological unity of society, Soviet patriotism and friendship of the peoples of the USSR, the cohesion of people around the party of communists, unprecedented heroism and courage of Soviet soldiers" [1].

FOOTNOTE [1]. Theses of the CC CPSU. 50 years of the great October Socialist Revolution. M., Politizdat, 1967, page 21. ENDFOOTNOTE.

Great service in the victory over the enemy belongs to the railroad forces and the special formations of the NKPS. In the years of war by them there were restored and built: 117.1 thousand kilometers of main, secondary, and station tracks and 13022 small bridges and pipes, 2756 large and average bridges, were laid 70872 km of lines of communications, were put into operation 2345 water-supply

points and 7990 stations and sidings, and also 182 steam-locomotive depots, are laid 76984 switch complexes.

Furthermore, in five years (1941-1945) the builders of the NKPS and military railroad workers constructed about 10 thousand km of new lines. This amount of new mainlines has never been laid in our country in any one of the five-year plans.

More than fourth century separates us from those unforgettable years. In these years our country achieved new frontiers in its social and economic development, in strengthening of economic and defense potential, in raising the material and cultural standard of living of people. Our railroad troops, which almost all this time I had the occasion to command changed too. With each year into the ranks came ever more competent and physically more prepared young people. Our economy to a sufficient degree ensured this with its great, contemporary technology. Frequently I look now at the vehicles and the mechanisms and think: "What (equipment) we had during the years of war - and we didn't mind"! And why not rejoice at the splendid equipment of the railroad forces ! In 1965 during the military exercises, before my eyes, within the short time there grew a combination bridge several thousand meters long. Recall, my dear readers, our world record on the bridge across Dnepr in Kiev - 81.5 meters. Thus we have the velocity of the steam locomotive and of the

spacecraft !

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In the last ten years alone three times grew power-weight ratio of railroad of the forces. With wartime this index cannot even be compared. During the exercises I involuntarily recalled the summer of 1943, the construction of the Staryy Oskol-Saraevka line. 95 kilometers of the track 25 thousand people laid in 32 days ! This is 3 kilometers in a 24 hour period ! What colossal labor and what low efficiency ! Of course, this is a view into the past from the summit of present day. Then we were sincerely enraptured by our tempos of construction, because we did not have contemporary vehicles and only dreamed about them. Now to me it was fortunate to meet our dream in actuality.

Soldiers and officers built new mainline. Neither wheelbarrows nor shovels ! Complete mechanization of works ! The soldier-railroad workers served only as controllers. On each kilometer there was 10 times fewer people than on the Sarayevo line, and the tempos of construction were many times higher. Several kilometers of completely finished track produced each day !

Yes, now the railroad forces have only old name, and their

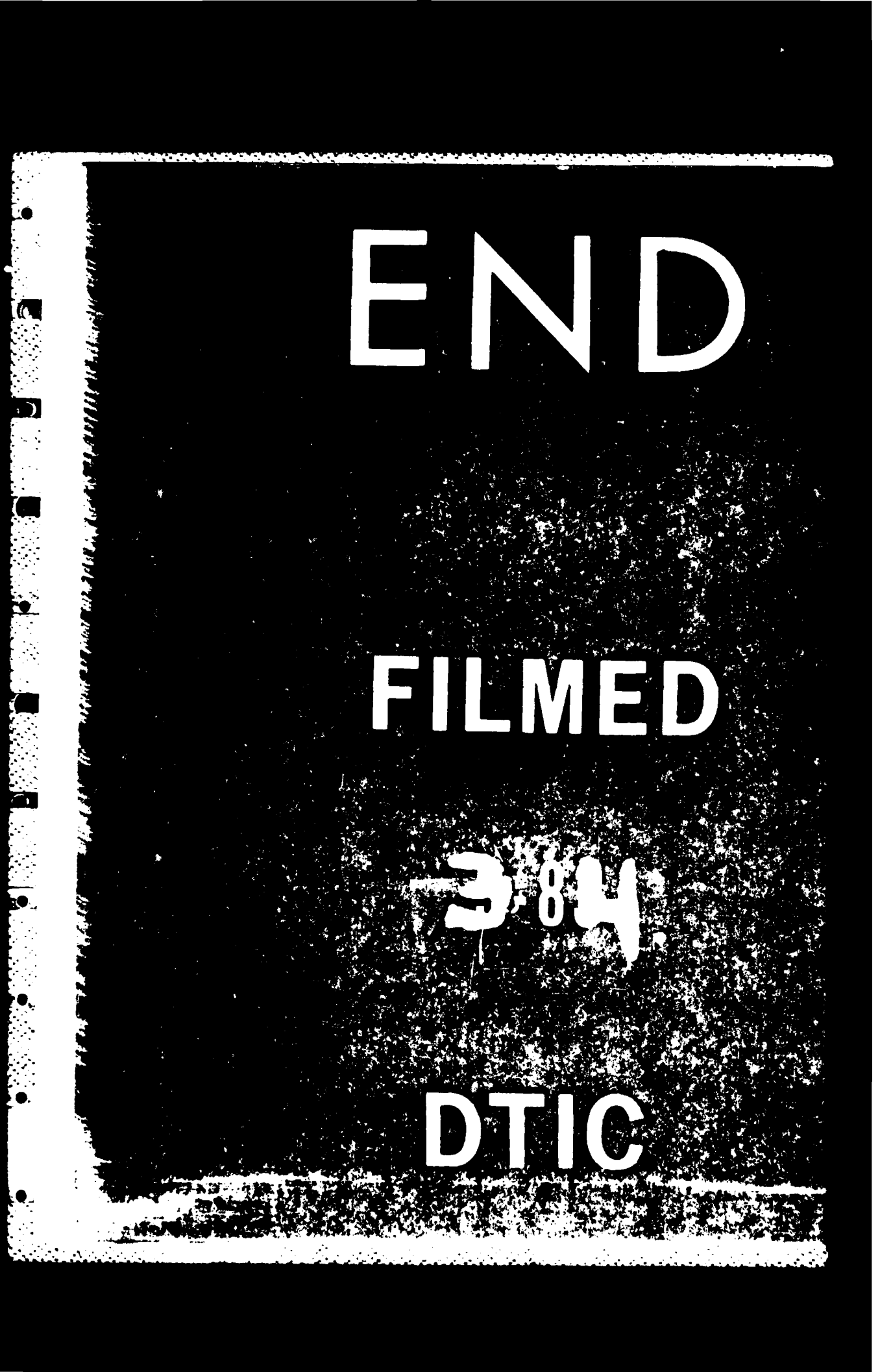
internal content - technology, organization, combat missions and methods of their execution - have radically changed. They have been brought into complete agreement with the requirements of modern war.

Thus, my story comes to an end. I know that far not all, who together with me, spike hammer and rifle in hand, took this difficult military path, were mentioned in his book. For this tens of volumes would be required.

A low bow to you, my dear friends, the toilers of the steel mainlines !

pages 326 and 327.

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